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# Present Imperfect, Future Conditional: Sustainability Models for Digital Information Resources

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## *Initiative - based funding*

Cultural institutions wishing to develop digital information resources are currently faced with a plethora of time-limited capital funding opportunities.

In Europe, the Information Society Technology strand of the EC's 5th funding framework is offering grant-aid for cross-domain initiatives using ICT to provide educational access to cultural resources. "The Invest to Save" initiative is offering consortia of Government funded institutions in England, the opportunity of one-off funding for capital developments that could offer end-user service improvements for reduced recurrent costs.

In higher education, the Research Support Library Programme is paying to digitise resources to enhance accessibility beyond their holding institution. At school level, the National Grid for Learning is encouraging the development of educational digital content, while The Peoples' Network, envisaging the delivery of electronic learning resources via outlets in public Libraries, has caused the New Opportunities Fund to announce £50 Million worth of bids-based grant aid for digitisation.

Museums are likely to bid for, and benefit from, every one of these initiatives and support seems to be gathering behind the report, *A Netful of Jewels: New Museums in the Learning Age* which looks as if it may deliver some £55 Million of grant aid to upgrade the training, infrastructure and content aspects of electronic service provision.

## *Can the diamonds be forever?*

However successful museums are at obtaining digitisation funding, and however exciting the resources they build with this money, their effort will be nugatory unless the resulting services are sustainable. A sustainable service would have at least most of the following attributes:

- The user interface should be designed to fit in with current good practice, to interwork with other services as appropriate, and be enhanced as the state of the art progresses. This implies a continuity of development and maintenance support.
- The service must be available 24 hours a day and 7 days a week.
- There must be a rights management system to protect institutional investments from unauthorised exploitation.
- Security back up, virus protection and disaster recovery procedures need to be in place.
- Archival quality copies of the resources need to be retained in secure storage remote from the service provision site.
- To protect against physical degradation and technological obsolescence, these needs to be a long-term programme of media and platform migration.
- Provision must also be made for the updating and refreshment of content in line with new developments in interpretation or presentation.

## *Funding sustainability*

All of the above provisions require recurrent expenditure beyond the end of the content creation project, and it is pertinent to ask where the funding for this might come from.

Some grant-aided services manage to continue by finding new sources of grant-aid, and cross-subsiding their delivery services from new project funding. I liken this to riding a tiger: it's fine until the time comes to dismount!

Some services obtain commitment from core institution funding, and in many ways, integration with other institutional activities may be ideal. This does however, put the service into annual competition with other activities of the institution, and priorities may shift over time.

One approach which has proved successful in some sectors, is the earmarking of top-sliced grant aid. The Joint Information Systems Committee of the Higher Education Funding Councils runs Nationwide services, such as super JANET, out of revenue top-sliced from the grant-in-aid of each UK University. Such an approach is more comprehensive and efficient than trying to raise voluntary contributions from 200 separate institutions, but it may not be possible in the case of Local Authorities.

Sponsorship is often suggested as a way of supporting websites: the BL OPAC is sponsored by amazon.com, and the 24 Hour Museum is sponsored by Vauxhall. The main drawbacks are the amount of website advertising demanded by typical sponsors and the difficulty of finding sponsors "appropriate" to the institution's mission.

An alternative approach is to recruit large numbers of corporate or individual sponsors or "friends", who are willing to contribute a modest annual sum to help support the service. This is not unlike the sort of organisations that currently support physical museums, up and down the country.

It is often suggested that museums could make a great deal of money out of commercial sales of their digitised images. In practice, outside the major fine art museums, it is unlikely that any individual institution would be able to make enough from this source to do much more than cover the cost of sale. It has been said that the only way to make a small fortune from internet image sales is to start with a large one!

There remains one source of funding for service provision, which is Educational Licensing. It is a general principle of the current government, that any digital content created with public funding should be freely accessible for education. But "freely" accessible does not mean "without cost", and it would seem appropriate that Libraries and schools should be asked to pay towards the delivery service so that access can be made widely available, free at the point of use.

Some large institutions may be able to sustain a viable service though one or a combination of the above strategies, but it may be advisable for many institutions wishing to create content, that they should pass the responsibility for sustaining a delivery service, to a trusted third party.

## ***Setting up SCRAN***

One such an organisation is SCRAN, the Scottish Cultural Resources Access Network. SCRAN was set up some three years ago by a group of institutions wishing to create digital educational content from their cultural resources. SCRAN is a registered educational charity, the Board of which is elected by its content

providers. SCRAN was set up to obtain and administer Grant Aid, to manage Digital Intellectual Property Rights and to run a multimedia delivery service on behalf of its members.

The major grant that SCRAN has been awarded to date is £7.5 Million lottery funding from the Millennium Commission. Matching funding has to be found for this, but it has been agreed that much of this can be in the form of in-kind contributions, including staff time, but in particular a valuation of the Intellectual Property Rights in each new digital asset.

Before any contributor can obtain grant aid from SCRAN, they have to sign a SCRAN licence agreement. Under the SCRAN Contributor Licence, the contributor retains all commercial rights in the digital content, but it grants to SCRAN a perpetual, non-exclusive, worldwide right to non-profit educational use. Educational Institutions, including schools on the National Grid for Learning and Public Libraries on the Peoples' Network, can pay an annual fee (and 1,500 have already done so) to obtain a User Licence. The SCRAN User Licence provides an annually renewable, non-transferable, institutional right to non-profit, non-proliferation, educational use. In essence, any member (including schoolteachers and students, as well as visitors to libraries) of a SCRAN - licensed institution, is able to download their own choice from tens of thousands of high quality images, movie and sound clips, virtual environments, resource packs and more, all copyright-cleared for teaching or private study. The only real restriction is the non-proliferation clause which prohibits users from mounting SCRAN resources on their own internet web-site.

Providing easy educational access while still protecting contributors' IPR requires a sophisticated Rights Management System. SCRAN puts all its textual material, plus thumbnail images of each multimedia asset, onto the World Wide Web. This is important because home use is believed by

SCRAN to be part of its educational outreach, and it is safe because thumbnails downloaded from the web have little or no financial value.

Access to screen size images plus other multimedia objects is only available to Licensed Users. The identity of such users is checked by an Authentication system (based on username, password and internet address) and their permission to download SCRAN assets is established by authorisation system. Before each asset is downloaded, SCRAN adds to it a watermark (with details of the objects' copyright) and a fingerprint (with details of the downloading transaction - when, who by and on which machine). This information is displayed in visible characters at the top and bottom of the image, so the user is in no doubt about what has been recorded. Since this visible information could easily be cropped off however, the same transaction is also encoded into the image itself using an algorithm that makes it invisible to the naked eye, and very difficult to destroy without damaging the downloaded asset.

Licensed assets are made available at a size and resolution that is appropriate to today's generation of personal computing equipment. There is little point in offering material that would take too long to download over the network, or which could not easily be viewed on a standard screen. But it would be equally inappropriate to be satisfied with digitising material so that it was only suitable for today's technology. Network bandwidth, and hardware capability, are constantly improving. SCRAN therefore insists on digitisation at some sixteen times today's display standard, so that the networked resources can be upgraded in future without having to re-scan the original objects.

The resulting high quality assets, (the scan of a 35mm slide, for example, results in an 18mb file) are retained offline as archival masters. But they are also ideal for commercial exploitation, including high quality print publication. As the number of digital images on SCRAN approaches

40,000, SCRAN is positioning itself as an online image library. For some subject areas, for example Scottish History, it can already act as a one-stop shop, and the universal nature of the material in Scottish Collections make it useful as a more general resource as well. These advantages will be re-inforced with the introduction of an online rate card, so that picture researchers can be made instantly aware of the cost of specified uses of the images they have found, thus cutting out time-consuming correspondence and significantly lowering the cost of sale.

We expect the smaller institutions will come to use SCRAN as their main picture marketing service, while larger organisations will see it as an interesting extra channel to market. The commission received by SCRAN on such sales will help fund the SCRAN educational delivery service, and since SCRAN is not-for-profit organisation, any surplus will be used to grant aid further digitisation projects.

