CASE STUDY

THE DORNOCH HISTORYLINKS IMAGE LIBRARY

The Importance of Images Linked to the Museum Catalogue

The importance of linking images to the Dornoch Historylinks catalogue was recognised in early 2004. At this time approximately 30% (c 2,000 objects) of museum acquisitions had been recorded and, particularly in the case of post cards and to some extent in photographs and documents, it was apparent that images linked to records were of great benefit in simplifying the process of catalogue searches to weed out duplicates. A target of 2008 was set for the elimination of our acquisitions backlog, with recognition of the need for parallel image capture. Fortunately, a newly recruited part-time member of the museum staff was keen to fill quiet moments, during visitor reception duties, scanning postcards, photographs, negatives, colour slides and documents.

File Naming and Storage

At the outset of the image capture process a structure was established for file naming and the storage of digital images. It was decided that digital images would be given a filename in keeping with the museum's ADLIB catalogue number, already established as a multiple digit number consisting of four digit year of cataloguing, followed by a unique three digit number, with optional addition of a further two or three digit number for objects within a collection, e.g. photographs within an album. Whereas the ADLIB program uses a dot separator for the catalogue number field, this norm has not been followed for image library purposes. It was considered prudent to adopt an underscore separator for image files, to avoid confusion given the standard, general use of dot separator in file names. Storage was structured in a master folder /museum photos, with sub folders by cataloguing year, e.g./museum photos/2001 etc. Once the cataloging backlog had been accomplished it was recognised that this arrangement would simplify remote back-up processes, requiring regular copying of the current year sub folder only.

Portable Document Format (pdf) Files

Within a few weeks of embarking on the image capture process it became evident that the museum's best interests lay with the production of portable document format (pdf) files for all documents, particularly those of multiple pages. The museum acquired Adobe Acrobat Version 7 software with an integral scanning facility and conferring the significant advantage of Optical Character Reading (OCR) of scanned printed or typed documents thus enabling word or phrase searches of pdf files. Additionally there is a software facility to extract one or more pages from a pdf file that can then be saved as JPEG and linked to the ADLIB record to provide a thumbnail image, thus all image capture requirements can be satisfied at one time. Obviously there was an addition to our storage structure, with the introduction of a master folder /museum pdf with year sub folders. As our backlog cataloguing work proceeded we ultimately produced further master folders / museum TIFF for archive images and /museum audio for MP3 files.

The Additional Benefits of Catalogue Images

An off shoot of the linking of images to ADLIB catalogue records was a simple means to create subject related albums, which could be made available to museum visitors as slide shows. The museum had a 'public access' personal computer (PC), located in our modest reference library area, with a read-only, limited field version of the ADLIB catalogue. On this PC we added a series of subject related slide shows, which grew in range and the number of slides within albums as our backlog cataloguing and image capture progressed. Simple instructions were provided alongside the computer to allow visitors to access slide shows and it became our practice to have a slide show running, as an additional display, at any time the PC was not being used by a visitor. This visitor facility developed over the period 2004 - 2005 to include ready access to slide shows of the collections within donated photograph albums or boxes of colour slides and to pdf files of documents of particular local interest, given appropriate descriptive titles.

Progression to Interactive Image Display

Following the introduction of slide shows in 2004 we had noted increasing interest in images of school groups, sports teams and local events in which visitors might be able to spot themselves, relatives or old friends. Often the viewing of these images led to feedback of detail or background information for addition to our ADLIB record. In contrast, visitor interest in access to our catalogue was limited and it became glaringly obvious that our public access version of ADLIB did not provide the ease of comprehensive search and the presentation of information in keeping with expectations of internet aware users. The museum's Trustees decided that the time had come to acquire a user friendly means for comprehensive search and ready access to images and relevant detail of our complete collection. It was agreed an integral facility for user interaction providing information concerning any image viewed formed a highly desirable system requirement.

At the beginning of 2008 there was a trawl of the market to review available software options. Initially we focused on stand-alone systems for installation on our museum public access PC but it became apparent that this approach was likely to prove the most expensive, with self imposed limitations for system developments. A web based approach offered the best means to meet our current and future needs. We viewed the ADLIB website adopted by Aberdeen Museum but ultimately favoured the community and museum image library websites employing software developed by a local Cromarty based company, Plexus Media Ltd. This software met all our requirements including an interactive facility for users to add comments about a viewed image. From the existing image library websites we were able to witness the extent to which the comment facility had been used, in some cases leading to extensive dialogue between users.

Preparations for Image Library

The museum's target of 2008 for the completion of the backlog cataloguing of all acquisitions proved to be generous and, as a result of concentrated effort, it was completed before the end of 2007. However, with limitation in the number of volunteers involved, we could not achieve matching progress in backlog image capture. By the end of 2007 approximately 50% of our ADLIB catalogue records had linked images.

Our initial meeting with Plexus confirmed the suitability of the software to meet the museum's needs and the intuitive nature of site maintenance and uploading processes. In the interests of early establishment of a website, Plexus agreed they could undertake initial batch uploading of images and data.

Following subsequent Trustee deliberations, we quickly moved to detailed negotiations. In essence it was agreed that an additional 'Dornoch Historylinks Image Library' (DHIL) website would be established using a Plexus Media Ltd server and 'seeded' by Plexus batch uploading of the then available 4000 catalogue records and linked images. As part of the Plexus package it was confirmed that the image library software would be upgraded in keeping with all future developments.

The museum determined that each 'Picture page' of the DHIL would contain data from five ADLIB database fields: *object_number* (catalogue number), *title, description*, *production_date_start* (early date), *content.subject* (keyword). Although not a field for display, for Plexus purposes, the ADLIB database field *reproduction.identifier_URL* (path and filename of linked image file) was included in each exported record. The data was extracted using the integral ADLIB facility to export selected records and fields to a comma separated values (csv) file. For Historylinks purposes it was found that data export was most easily accomplished by selection of ADLIB records by year of cataloguing (i.e. the first four digits of our catalogue number). In the museum version of ADLIB, the 'Search Wizard' entries were: Collection - object number - four digits of year - All keys. This produced the complete listing of records for the relevant year with thumbnail images. Given that not all our records had linked images at this time, it was necessary to eliminate from the initial selection those records without images, i.e. no thumbnail shown in the listing. For this process, all records were marked (ADLIB top menu Mark - Toggle Marks) then a visual check was conducted with the unmarking (disabling of the tick in the box to the left of the record entry) of those records without a linked thumbnail image. When the selection was completed the records were exported: File - Export - comma separated values - location and filename. On completion of the export, all records were unmarked - Mark -

Remove all Marks. The text files by year were then easily correlated by Plexus with copies of the museum's JPEG files already stored within sub folders by year of cataloguing.

The csv text files and JPEGs were sent to Plexus by the end of March 2008 and, while awaiting the homepage design, program modifications to meet specific Historylinks requirements and batch uploading of images and data, the museum project manager began the process of recruiting volunteer website Administrators.

Website Administrators

The basic requirements in the selection of DHIL Administrators were an interest in IT, broadband access from home location and acceptance of a long term commitment, given that the vetting of users' comments would be ongoing.

There are two Administrator Levels. The Historylinks project manager and a Plexus nominated programmer were designated Level 2 Administrators and given full rights, with all other Administrators nominated as Level 1. The Administrator's Log On procedures (selection of name from a drop down list, followed by entering a password) leads to presentation of a 'Control Panel' page which has a drop-down menu headed 'Administration Options', beneath which there may be a list of comments yet to be accepted and published. Any administrator can conduct the comment vetting process. Current DHIL protocols give discretion to administrators within the broad understanding that comments should contain additional factual or background information. A basic comment such as 'Nice photograph' would not be accepted (there is a facility 'Site Comments' at the foot of the homepage for such general comments) but 'A nice photograph of my granny' would be welcomed because it adds value, indicating the image is a good likeness. All accepted comments are acknowledged to the originator by an automatic software generated e-mail reply.

The 'Administration Options' menu permits all administrators to: Add New Picture; Edit Picture Description; Add (and Edit) New Contributor; Add/Edit Website to Link Pictures To; Create (and Edit) New Group; View Comments Awaiting Publication; Edit or Delete A Published Comment; Add/Edit Albums. In addition, highlighted in yellow and restricted to access by Level 2 Administrators, the menu also included Delete Picture and Add/Edit Administrators.

There is a facility available, when 'Edit Picture Description' has been selected, to upload a pdf file. This is of particular benefit when the image displayed is only the first page of a multi-page document but, with due regard to download times, as a rule of thumb pdf file uploading is limited to files up to 4 MB in size. When this facility is used an additional link to the pdf file appears on the public site picture page.

An 'Image Library Administrators' Manual' has been provided by Plexus which complements the draft DHIL Protocols and Procedures document. The latter document is subject to updating and refinement as the DHIL Administrators learn from experience, with a target of spring 2009 for a comprehensive, published version.

By the time Plexus made available a beta version of the website on 24 April 2008, seven Level 1 administrators had been recruited and basic instructions were issued covering website access and image library 'proof-reading' requirements, including editing procedures. With 4,000 images uploaded in the batch process, each Administrator was allocated an initial batch of 300 Picture pages for checking, with delegated responsibility to edit text as required and a remit to report to the project manager any images considered in need of enhancement for website viewing purposes. As each allocated batch was completed a further batch was allocated. The rate of progress varied between administrators but within four weeks all 4,000 images and associated data had been checked. As a by-product, the total process provided valuable additional auditing of catalogue records with some duplicate images identified.

DHIL Launch

Before the end of May 2008 it was agreed that the DHIL was viable, providing images and relevant detail of 4,000 catalogued objects from the museum collection. It was decided to launch the website

on 1 June 2008, with primary access from the extant Historylinks website www.historylinks.org.uk From the time of detailed negotiation, through preparatory ADLIB extract of csv files, batch uploading and beta checking, to launch had taken 3 months.

An announcement of the launch was published in the local newspaper the *Northern Times* on 5 June and on that and the following day 1687 and 1725 'hits' were recorded. Within ten days there were 8 comments submitted, 5 of which produced factual or background information subsequently added to our ADLIB catalogue records. The Plexus software provides a valuable 'View Stats' facility on the Administrators' Control Panel page, providing statistics on visits to the site on any given day, how many times specific images have been viewed, where people have come from to get to the site and, if they have used a search engine, which search terms they have used.

Post Launch Activity

In the exporting of record fields from ADLIB to csv files only the first occurrence of any field is extracted. Hence, in the event of multiple images linked to any record, the second and subsequent images will not be included in the csv file. Rightly or wrongly, as an expedient in our acquisition backlog cataloguing, we had taken a decision to include all images on a page of a photograph album, or similar images in a postcard collection, in a single ADLIB record with appropriate extension of detail in the description field. For example an album could be allocated a catalogue number 2006.123 with the ADLIB record for the first page of six images given the suffix 001 - 006 and subsequent pages numbered accordingly. The description of each record would include, with appropriate individual suffix number, any noteworthy details in relation to any or each image. The csv extract process for the record of the first album page would only provide, from the *reproduction.identifier_URL* field, the detail of the first image, i.e. 2006_123_001 thus DHIL administrators' action was required to upload the additional images 002 - 006, with copying of relevant description text. At first sight the task may appear horrendous but we quickly discovered that, with JPEG files exported with image width of 735 pixels as required by the DHIL, our complete \museum photos folder could be copied to a 2 GB flash pen. This permitted Administrators to work at home on a given batch of records and, particularly with use of the shortcuts of Ctrl C and Ctrl V to copy and paste, the uploading of multiple linked images and addition of appropriate descriptive detail proved to be relatively easy, albeit time consuming.

Prior to DHIL launch a start had been made to capture images for the 50% of catalogued objects without a linked image. Keeping pace with this capture activity, plus the uploading of museum acquisitions and multiple linked images, added 500 Picture pages to the DHIL in July 08. In addition, over 100 pdf files were uploaded. There has been some levelling off, in the order of 200 image uploads, in subsequent months. The uploading of images and data by volunteer administrators has been simplified by the use of flash pens for the downloading of files from the museum catalogue PC. As outlined in relation to initial batch uploading, selected fields from project manager nominated ADLIB catalogue records are exported to a csv file and using the Picasa program, the required linked images are selected and exported, with a picture width reduced to no more than 735 pixels. (The Picasa export process in no way affects the original JPEG file.) The exported csv and reduced size JPEG files are downloaded to a flash pen enabling an administrator to work in their own time from their home location. In some instances, because the csv file and reduced width JPEG files are of small size, it has been possible to send them as attachments to an e-mail, eliminating the requirement for an administrator to travel to the museum.

By virtue of a Museums Galleries Scotland grant awarded in July 2008, the museum will be able to employ a seasonal member of staff for three days per week from November 2008 to March 2009 to complete the backlog image capture of catalogued objects. The grant will also enable us to commission studio photography of a large 1783 map of the Dornoch area with the resultant TIFF file added to the museum archive and used to permit viewing in close-up on the DHIL using the integral 'Zoomify' facility. A further element of the grant will be used to commission Plexus work in the enhancement of selected images for website viewing and the Zoomify process for the 1783 map and selected aerial photographs from the museum collection.

A target date of 31 March 2009 has been set for images and relevant detail of the complete museum collection to be available on the DHIL. Thereafter it will be the museum's aim to achieve uploading of catalogued images and data within one month of object acquisition.

Lessons Learnt

The principal lessons learnt by the time of launch of this website were:

- the advantages gained by initial batch uploading of images and data outweigh the additional commissioning expenditure
- the image library software allocates sequential 'Picture' numbers to each uploaded image, used thereafter in various administrative functions including 'Search', but for the museum the catalogue number is all important and, whilst this appears on each 'Picture page', a software patch was required to include it in 'Search'
- documentation on image library protocols and procedures should be compiled from the outset; as with all IT developments, what seems obvious one day can be forgotten the next - record as you go!
- as a matter of routine all administrators should note and inform the project manager of images requiring enhancement for website viewing (enhanced images will not supplant an original TIFF/JPEG - Historylinks has accepted the enhanced image should form a second catalogue record linked image with an explanatory ADLIB note)
- copyright issues present a problem - in particular, for many postcards the originator and publisher remain unknown; a homepage caveat acknowledges the problem but a complete solution is outside the capabilities of small, volunteer run museums acting independently and should be addressed corporately by a central body

Overall the image library has provided:

- value for money
- valuable feedback in both comments and statistics
- excellent search facilities that are now routinely used in various museum activities
- the opening of the 'Aladdin's Cave', permitting public access to the museum's total collection, the majority of which would otherwise remain hidden in store