Rambert Archive, 2012
Case Study: Digitising our moving image collection

Why the project was happening
Rambert is Britain's oldest dance company as well as Britain's national company for contemporary dance. As such Rambert's archive has a vast and growing number of clips of footage of rehearsals and performances, vital to the work of the Company in creating, recreating, recasting and re-presenting work from its repertory.

In 2011 the moving image footage was held on a variety of analogue and digital carrier formats. Most of these were, or were at risk of becoming, obsolete. The Rambert company was also about the move to new purpose built premises.

The carrier formats we held at the time of the project were:
Film:
1 x 35mm film
53 x 16mm film (in 35 packages e.g. cans, boxes etc.)
1 x Super 8mm film

Video (analogue):
Open reel:
2 x 2 inch Quad Video Tape
4 x 1 inch Type C Video Tape
11 x 1/2 inch open reel video tape
Cassette:
23 x 3/4 inch U-matic
3 x VCR
4 x Betamax
1352 x VHS
1 x S-VHS
10 x Betacam
31 x Betacam SP
69 x Video8
51 x Hi8

Video (digital cassette and DVD)
10 x D3
6 x Digital Betacam
44 x DVCAM
143 x Mini DV
15 x DVCPro
143 x DVD

The collections had been surveyed prior to 2011 by the London Screen Archive and by an audio-visual consultant. The latter survey fed directly into our fundraising bid for digitising the collections.

To aid the move and to make the archive collections discoverable and re-useable Rambert was successful in obtaining support from the Heritage Lottery Fund. This support covered a

number of activities including the cataloguing and digitisation of the moving image collection held on VHS tapes.

We were later able to gain support from the Erik Anker-Petersen Charity to digitise the other moving image carrier formats and to create a bespoke in house moving image library for the digital footage.

What we did
The HLF support enabled us to employ a qualified archivist to undertake the cataloguing of the footage content, as opposed to listing of the carrier format objects, and to manage the digitisation of the footage.

The Project Archivist recruited 16 volunteers to watch the VHS tapes in order to catalogue and to select the footage clips from each tape to be digitised. The volunteers collected data about the content of the tapes including details such as the dancers in the footage, dates of the footage, visual and audio quality of the footage. The descriptive data was entered onto forms to standardise it.

The Project Archivist carried out research into the current best practice for digitisation of moving image using sources such as Jisc Digital Media (no longer active), other archives' experiences and LinkedIn groups (there are a number of these. You need to have a Linkedin account to access them). She carried out a tendering process to select a digitisation firm. This included taking advice from the firms themselves about the formats they recommend, conducting site visits and discussing workflows.

The footage was entered onto a spreadsheet that listed a 'V number' for each tape, the timings of each clip on the tape, a description of the contents of the clips including dancers, dance work name, audio and visual quality.

We decided to digitise each clip on the tapes to three separate files for preservation, high quality but compressed everyday access (we called these the 'mezzanine files'), and smaller web streaming files:
Uncompressed
Video 720x576, uncompressed 8-bit 4:2:2 with interlace preserved, wrapped as Quicktime (.mov)
Audio uncompressed PCM 48 kHz 16-bit Stereo wrapped with the video as Quicktime

Mezzanine
Video 720x576, DV codec at 25 Mbits/sec (4:2:0) with interlace preserved, wrapped as Quicktime (.mov)
Audio uncompressed PCM 48 kHz 16-bit Stereo wrapped with the video as Quicktime

Web access
Video 768 x 576 (4:3) or 1024 x 576 (16:9) 25fps progressive scan H.264 at Main Profile, target data rate 2,000kb/sec wrapped as .mp4
Audio 48kHz AAC-LC encoded stereo at 320kb/sec wrapped with video as .mp4

The tender to digitise the VHS tapes was awarded to BBC Studios and Post Production, who are no longer trading. They had an excellent grasp of the needs for preservation as well as balancing that with storage and access. They provided the digital files on a QNAP 48TB hard drive with LTO5 back up tapes.

The Project Archivist designed a workflow so that the digitised footage clips could be matched to the catalogue entries and the physical tapes. The file naming systems for the digital files followed this basic schema:

Example a tape with 3 clips on it.
The tape is given the unique ref number V100
The clips are digitised to the three file formats, using the following naming convention:
V100.1.A1; V100.1.B1; V100.1.C1
V100.2.A1; V100.2.B1; V100.2.C1
V100.3.A1; V100.2.B1; V100.3.C1

Checksum files were created with a A2, B2, C2 file name suffix.

The workflow and file naming structure were essential for managing the files and information but meant that the digitisation work had to be very accurate and as a result time consuming. The catalogue entries for the file formats were given reference codes that fit in with the revenant part of the collection catalogues, for example RDC/PF/01/0365/001.

We reproduced much of this workflow for the digitisation of other physical carrier formats when we received supplementary funding from Erik Anker Petersen Charity.

We worked with Cameron Communications, who had already created a media library from Scottish Ballet, to create a bespoke 'video library' to enable on-site, at-desk, access to the digital footage.

Cameron Communications were able to import the digitised files and catalogue information (as a CSV file) into the video library. Users at Rambert can log into the video library to watch the footage without having to access the digital files themselves. This reduces the chance of accidental deletion, viruses etc. Born digital footage can be uploaded directly to the video library, which then acts as a repository for our digital archive.

What's next?
We have modified the video library so that it can link videos to other digital objects such as photographs. We don't currently have the capacity to upload and link the videos and digital documents as a priority so this will be an ongoing task.

We need to find a cost effective way to back up the expanding digital archive off-site as a disaster prevention measure, and to develop a cost effective way to manage the ongoing preservation of the digital material.

Arike Oke, Rambert Archivist 2016