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BFI InView
Final Report

by Jeff Hulbert

Friday, 16 October 2009

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1 Executive Summary

a InView has been a two-year project run by the BFI and has been based at the BFI National Archive, at the J Paul Getty Jnr Conservation Centre at Berkhamsted. Its objective has been to provide access to 600 hours of digitised archive video, documents and associated resources for the enhancement of learning, teaching and research within the areas of the arts and humanities. Much of the content selected had never previously been available for general academic use.

b The project ran from April 2007 until March 2009 and sought to deliver content that would illustrate how some of the key social, political and economic issues in Britain had been represented, expressed and articulated through moving image media forms. The project has delivered a contrasting range of film and video content that has been assembled from currently dispersed collections, to create a unique resource to serve to a broad audience and serving the specific needs of Higher and Further Education and the wider learning, teaching and research community. www.bfi.org/inview

c Efficient and economic resource consumption throughout the course of the project resulted in a significant underspending. This enabled the BFI to propose extending the range of moving image material that could be made available. JISC warmly supported the proposal and BFI subsequently concluded an agreement with Fremantle Media that allowed the project to serve up to 200 hours of television current affairs material, thus extending the range and type of moving image material made available through InView. The total volume of moving image material that will be served by BFI InView, by the end of September 2009, will amount to approximately 1,000 hours, or 67 percent greater than the original project target.

d InView delivers to an exclusive academic audience digitised moving image material drawn from the holdings of the BFI National Archive. The material selected for the project sought to illustrate how some of the issues that helped to shape contemporary Britain had been depicted through the mediums of film and television. For too long academic access to such moving image resources had been difficult, and even though that has been changing in recent years, the unique approach taken by InView has been to bring together moving image material derived from a diversity of ownership sources, and to facilitate access to material that, in some instances, would not otherwise have been available for serious academic study. The unifying approach has been to serve the varied materials through a single website. The project was built as a partnership between several content owners and it has been this element that has enabled differing perspectives to be assembled, each of which, potentially, has its own story to tell.

e The report provides some details about:

i The project background.

ii The aims and objectives

iii The methodologies adopted to ensure that the assets were delivered in good quality, and to the agreed specification

iv Licensing issues

2 Background

a InView has been a two-year project run by the BFI and has been based at the BFI National Archive, at the J Paul Getty Jnr Conservation Centre at Berkhamsted and at BFI in central London. The objective of the project has been the provision of 600 hours of digitised video, documents and associated resources for the enhancement of learning, teaching and research within the areas of the arts and humanities. It utilised a curated and thematic approach for selecting and explaining moving image material that would demonstrate how some of the key social, political and economic issues had been represented, illustrated, expressed and debated through moving image media forms. The project aimed to deliver for the first time, a contrasting range of film and video content drawn from currently dispersed collections which, joined together, would create a unique resource. It has been made available to a broad audience and serving the specific needs of Higher and Further Education and the wider learning, teaching and research community. The range and profile of the various partners on this project not only made available materials of extremely high value, but also ensured high visibility, audience and use of the resource. It has been designed to facilitate access for learners, teachers and researchers to valuable primary resources that have either not been available before, or only in very restricted circumstances. Opening up access to these materials would provide many new opportunities for enquiry and the development of new methodologies across a range of subject areas, which would be to the undoubted benefit of the wider learning community.

3 Why it was important

a The media has played, and continues to play a critical role in our society, informing and educating citizens from a variety of perspectives. The state has for more than seventy years addressed the public on a wide range of issues through the medium of moving images. Since 1978 the public has been able to witness Parliament – the very core of the British political system – in action, first on radio and then on television. The BBC, as a national public service broadcaster, playing out its role as part of the Fourth Estate, has offered mediated packages of the 'news' and 'current affairs' informing Britain's citizens about national and regional issues. Innovative current affairs shows such as Channel 4's After Dark series, originally pitched as 'Democracy in Action', have provided a public space for debate among leading intellectuals about key contemporary political, social and cultural issues. Campaigning organisations and political parties have used the moving images extensively to communicate their messages to a wide audience.

b This project was focussed firmly around the digitisation and networking of moving image materials, copies of which were held by the BFI National Archive, but whose content was owned by several national partner organisations from both the commercial and public sectors. It was concerned with providing an in-depth resource which offered illustrations, in a number of cases, through the juxtaposition and contextualisation of a range of materials, of how public issues 'played out' across the media. Material was selected through the adoption of a broad thematic approach. This illustrated how different producers and distributors of moving image content sometimes adopted different perspectives within national social, cultural and economic debates. However, at the same time it was recognised that any selection process would be partial, by definition, and could only represent the collections that were in range for the project. The broad criteria that were established and faithfully followed by BFI's curatorial specialists were agreed iteratively with representatives drawn from the academic community.

c The online resource has been organised by way of broad themes which include films and television programming reviewing the UK economy, its industries, transport and agriculture, illustrating some of the changes and transformations that each had undergone in the years since the beginning of the second world war, or in some cases even earlier. The advent and subsequent decline of the mixed economy consensus and the impact of those changes has been witnessed in various ways by film and television programme makers.

d The national Issues on which the project concentrated comprised: health; education; immigration, multi-culturalism and equality; environment; law & order; and the economy. The selected material covers more than seventy years and provides examples of both continuities and shifts in prevailing attitudes as well as in government policies.

e Users can study themes in chronological sequence, but also in many cases are able to juxtapose the representation of different viewpoints and interpretations. The resource draws its unique strength from the fact that it has been sourced from different collections of national importance, each offering, potentially, a different perspective. The moving image materials used by the project have been drawn from the following collections:

i **Public Record Films** relating to the following government departments and agencies; Home Office; Department for Education and Science; Department of the Environment; Department for Trade and Industry; Department of Health and Social Security; Ministry of Agriculture, Fisheries and Food; Ministry of Information, and Central Office of Information; General Post Office; National Coal Board; British Rail; BFI Production Board; and the United Kingdom Atomic Energy Authority. The films are held at the BFI National Archive by arrangement with The National Archives (hereafter referred to as TNA)

ii **Parliamentary coverage**: materials held at the British Film Institute by arrangement with the Parliamentary Broadcasting Unit

iii **BBC television**: national news broadcasts and current affairs content held by the BFI National Archive

iv **Campaigning Films and Videos** (e.g. material produced by political parties and interest groups) held at the BFI National Archive or supplied by content partners

v **Current affairs debates** and in particular the 'After Dark' series produced by Open Media

vi **Now & Then interviews**. These interviews were produced by the television personality Bernard Braden during 1967 and 1968 for a television project that was ultimately never realised. Surviving in their uncut format the interviews – comprising leading contemporary figures in politics, entertainment and business – provide a unique perspective on the 1960s. Every surviving interview, one of the more than 300 recorded, has been digitised for the project. A few were not available, principally because major elements, such as sound tracks, were missing from the material donated to BFI.

vii **Fremantle Media** – of the order of 200 hours (approximately 450 programmes) drawn from the Thames TV collection. The collection comprises This Week—(First phase: current affairs programmes dating from 25 July 1968 through until 20 July 1978 [341 programmes], and Second phase: current affairs programmes dating from 19 June 1986 until the programme finally closed on 17 December 1992 [272 programmes])

and TV Eye—current affairs programmes dating from 7 September 1978 through until 17 July 1986 [312 programmes]. The programmes were broadcast weekly by Independent Television.

f The BFI and its content partners applied their curatorial expertise with film, television and documentary materials to explain some of the range of cultural practices inscribed in the resource, for instance, the different mixes of exposition adopted by different media. The resource will enable InView users to bring a critical perspective to determining whether different institutional participants used moving images to communicate different perspectives (or simply recorded them for posterity) in different ways, and to analyse what messages they mediated. The National Archive's participation in the project has enabled InView to provide complementary written official documents that reveal some of the background to some of the moving image titles served.

4 The Collections

a The materials originated both on film and in a variety of video tape formats, and the great majority are held at the BFI's National Archive at Berkhamsted. The original condition of the materials (particularly film items) was known to be variable, but BFI's world-class expertise in handling and restoration, was a core competence within the project.

b The project also digitised paper documents—which were held in controlled archival environments at the BFI National Archive or at The National Archives in Kew. TNA held production files relating to the majority of the films in the public record collection, which often added crucial context—not only to the immediate circumstances of production, but also to the motives and methods of the government departments which initiated them. Some of those files were digitised and are served as an accompaniment to the digitised films. Additionally, the BFI special collections house a number of production files donated by the former National Coal Board and British Transport Films, and some of the were also digitised and served through InView as the add significant interpretive context, to the digitised films.

5 Building on Existing Resources

a This project has built upon the expanding, but still limited, online moving image research resource, both by adding additional content and through providing contextual information about some of the content (including information about the events / issues depicted, the film or programme makers, etc. as well as providing copies of production documents drawn from both the National Archives and BFI's own special collections. Other online film resources include the following

- NOF-funded British Pathe cinema newsreel website;
- Newsfilm Online: a JISC-funded project that digitised 3,000 hours of ITN and Reuters Newsfilm and associated studio scripts for use within UK Higher and Further education.
- The National Archive's (TNA) website which has showcased a small selection of Public Information films aimed at a general audience.
- JISC's own Film and Sound Online video resource.

b Similarly, other digitisation projects concerned with the interplay between political and public life and the media, although covering different historical epochs and in different media forms, nevertheless deal with similar issues:

- The JISC-funded 19th Century British Newspapers project, and
- The JISC-funded 18th Century British Parliamentary Papers (BOPCRIS) project
- The JISC-funded British Governance in the 20th century: Cabinet Papers, 1914–1975

c In addition, the project also builds upon other BFI initiatives and services:

- BFI Screenonline: A layered BFI service that has been the BFI's extensive online guide to Britain's film and TV history. It covers 2,000 titles and 800 personalities and includes educational resources for teachers and students; and
- The Film & TV Database [http://www.bfi.org.uk/ftvdb] that provides information on over 810,000 film and television titles, 1.2m people, 210,000 organisations and 23,000 events such as festivals and awards from all over the world dating back to the beginning of film production.

Aims and Objectives

6 Broad aims

a The project aimed to make widely available a body of key non-fictional moving image material, supporting production and other documentation, drawn from the project partners' archives of official (UK government-sponsored) and non-official materials. The project will, in addition, provide curation of these materials in order to provide users with key contextualisation and other aids to understanding the materials and their significance. In addition, it is planned that the selected items of publicly-produced material will be digitally preserved, thus ensuring their availability for future generations. **More than 600 hours of moving image materials and ultimately approximately 1,000 hours of video material.**

b Conservation of the selected moving image materials to the appropriate internationally-accepted preservation standards, following the MINERVA guidelines, and dependent upon items' condition. **A high proportion of the source material underwent conservation work.**

c Creation of digital preservation master tapes to deliver the highest quality image at the most cost effective rate. **All material has either been preserved on digital tape, or as digital preservation files.**

d Creation of digital encoding sub-master files from which will be created the web-based deliverable video files. **All material is held near to line as broadcast quality digital mezzanine files.**

e Creation of deliverable digital video files of all of the selected moving image material at suitable bit rates to provide cross-platform streaming and downloadable options for users. **Delivery-quality proxy digital video copies of digitised video material have been created for web service (Flash streamed video, Windows Media Player, QuickTime and H.264)**

f Digital capture of a range of unpublished archival documentation and images held by the project partners, including the BFI, TNA, including production and ephemera. **Digital masters and delivery quality (pdf) files of all documents have been created.**

g Establishment and maintenance of a 'database' for Higher and Further education users, within agreed service levels. It will pursue a curated and thematic approach; demonstrating how the key social, political and economic issues of our time have been represented, illustrated,

expressed and debated through moving image media forms. **A fully functional database and integrated web interface has been created.**

7 Key objectives

a To digitise the 600 hours of moving image materials and deliver them to UK Higher and Further Education users. **This original target has been exceeded by approximately 66%, and the extra footage is also delivered to online users**

b The creation of digital preservation masters of up to 7,500 pages of supporting documents and ephemera – including still production images (i.e. photographs of films in the course of production, and of some of the film makers), many of which would be OCR'd to facilitate user searching. **The original target was exceeded by approximately 33%. The extra material is also delivered to online users. In practice OCR was not feasible within the time available as document quality was variable, and some bore manuscript additions / amendments. However, regarding the Braden transcripts, OCR was possible and has been implemented.**

c The creation of lower resolution digital copies of the digitised documents and ephemera for onward delivery to UK Higher and Further Education users;

d The creation of contextual metadata to support all of the deliverable digitised materials. **A web-based user interface was created and integrated with the project's online database. It facilitates searching, browsing, viewing and downloading of video files and digitised documents and ephemeral material. Development of tools will follow on from a demonstrator website and has been developed after further analysis**.

e Creation of learning resources. Initial plans for the creation of an online academic journal that would promote the material specifically brought forward through the project and a more general exploration of the issues surrounding the collections were not progressed, although it remains under consideration by BFI.

Methodology

8 Governance

The project was managed by means of a light touch structure. The overall objectives were to facilitate timely project delivery, within deadlines and budgetary limits, and to provide support to the project management and team.

a **Project Board**

i The project board, which convened approximately every quarter, was responsible for higher-level project decisions which impinged significantly on core BFI services, budgets and processes. The project board comprised several BFI heads of service, the project director, project manager and a management accountant and, where relevant, BFI's legal counsel.

ii The Board's overall role was to steer and guide the project; to review progress from in-house reporting and outputs from the web-site; to review financial reports; to agree important decisions and changes to plans; and to review and manage risks.

b **Project executive**

This was supplemented by a project executive, comprising BFI's Head of Collections and Information, BFI's Head of Strategic Planning and BFI Screenonline, the project director and the project manager. It convened approximately every three weeks throughout the project. Its role was to review progress and to take operational decisions that were inimical to the project.

c **Advisory Group**

This was established as a mechanism by which academic experts advised the project team by means of helping to establish the film and document selection policies; to assist the project team in deliberating any content selection issues and to review reports provided by the project's Education Coordinator; to provide advice and support in cases of difficulty, subject to general project budgetary constraints; and to assist the project team with the promotion of the project

d **Content partners**

Liaison with the project's content partners was conducted at the formal level through meetings and informally through bilateral discussions and communications.

9 Materials for digitisation

There was a range of material that was available for inclusion in the project. However, in order to promote diversity and to reflect a balance between the materials, whose copyright was owned by the project's content partners, it was decided that material for digitisation by the project would be assembled by means of selection, since the discrete collections were considerably larger than the project's overall delivery target.

10 Broad Selection Criteria: Moving Image Materials

The selection criteria adopted by the project team, and endorsed by the project advisory group, were as follows:

a **Whole Assets, Not Extracts**. Any selected moving image asset has been digitised in its entirety: not only as selected extracts.

b **Themes**. The scope of materials ranged from the silent cinema era through to the present day and examples were selected according to the following broad themes:

- Education
- Industry / Economy
- Health
- Law & Order
- Environment
- Immigration, Race & Equality

c **Diversity** The team sought to select examples that were considered to be representative of the sub-collections from which titles were drawn, thus enabling a wide range of sub-collections to be visited by the project.

d **Copyright**. Material was selected for digitisation only if the copyright rendered it within scope of the project, i.e. the rights were owned by one of the content partners. If this had not

been established, the team would have been faced with the prospect of copyright clearance, which could be both time and resource intensive. The type of material available was, broadly:

i Official Public Information films produced by or for government departments (copyright has been already available to the project) Available to the project by way of TNA, a project partner.

ii Non-official COI-produced films, individual agreements with rights holders were concluded where not already covered by BFI's existing arrangements.

iii Films produced by the BFI Production Board (BFI copyright)

iv Films and videos produced by some public corporations, etc. Copyright for some of these sources was already available to the project under pre-existing BFI arrangements.

v BBC national television news and current affairs content. BBC was a project partner, so its exclusive material was available without any additional clearances becoming necessary. However, material that included third-party copyright issues was considered on a case-by-case basis, and largely was dropped on the grounds of cost and complexity.

vi Films released prior to 1939, which would be out of copyright by the time the project launched

vii Party political broadcasts (these required individual copyright clearance from each political party and licenses with each were signed accordingly)

viii Parliamentary meetings and hearings (copyright has been already available to the project, by way of licenses concluded with each house of parliament)

ix After Dark (copyright has been already available to the project, excepting third-party materials used in some of the programmes, as the copyright owner has been a project partner)

x Films made by special interest and campaigning groups (these required copyright clearance from each film maker) (copyright for some of the materials has been already available to the project under existing BFI arrangements, but where not separate license arrangements were concluded)

xi Documents: many of the digitised documents were held by TNA and were available to the project. Likewise the documents drawn from the BFI National Archive Special Collections

11 Document digitisation

a **TNA document types**. TNA holds many different types of documents, several of which were of interest to the project:

i **Central Office of Information (COI), etc., film and video production files**. These files typically comprised contractual information, scripts, film and music copyright details, shot-lists and commentaries.

ii **COI, etc., Policy files**. These files may sometimes reveal the policy decisions that led to a particular publicity campaign being pursued, or a film (or series) being made, or might reveal other sensitivities and issues. For instance: Ministry of Health 1962/3

Smoking & Lung Cancer - finance & policy (INF 12/938), covers a prospective £1m government-sponsored anti-smoking publicity campaign. Policy files ten to be more voluminous than production files, and their contents sometimes much more eclectic. This particular example comprised several hundred memoranda, minutes and associated documents.

iii **General correspondence files**. Such files variously comprise correspondence and across a range of related subjects and are frequently bulky.

iv **Closed files**. Some files selected were less than 30 years old and originally were closed. However, with help from TNA some files relating to film productions selected by the project were opened via the Freedom of Information application process.

b **BFI Special Collections**. Material principally comprised:

i British Transport Films production files

ii National Coal Board film production files

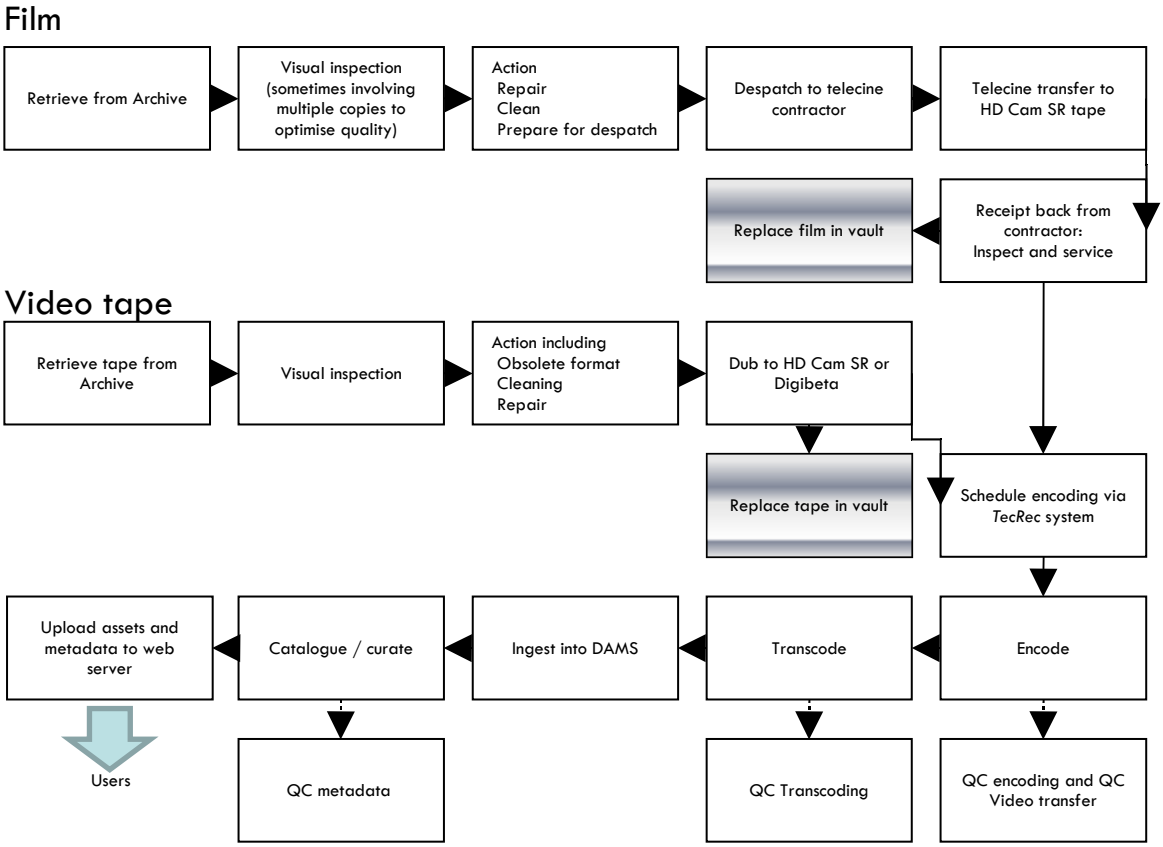
c **Braden 'Now and Then' transcripts**. 270 interview transcripts were donated to the BFI National Archive's special collections as a result of project team activity. The transcripts were typed contemporaneously with the interview recordings. In some cases the transcripts have survived, whereas the filmed interviews have not – such as with Private Eye's founding editor, Richard Ingrams. These transcripts were also given OCR treatment and are available as both facsimiles (PDF) and as corrected text files.

d Selection criteria

i **Exemplars of production files**. The project team was keen to select a number of production files, but recognised that many might be pedestrian, or scant, or generically very similar and thus potentially of limited academic value. Accordingly, files that were considered to present important new information, or were more extensive, were selected as a priority. Those exemplars could, it was felt, act as spurs to further study by users of InView.

ii **Exemplars of 'policy' file content**. The team was keen to digitise some policy files, but equally recognised that they were typically both voluminous and, in some cases, included material that was not directly relevant to the project's selected film titles. Accordingly, a few policy files were selected for digitisation, principally on the grounds that the bulk of their content was directly relevant to selected film titles, and also because the files again could act as stimuli for further study by InView users of TNA's wider resources.

12 Film and video workflow



The stages represented in the flowchart above were considered by the project team and colleagues from the BFI National Archive to represent key stages in the preservation and digitisation of materials. The process was integrated into the BFI National Archive's main database system and enabled a full audit trail to be established for each entity / title.

Once copies of titles had been created in a readily ingestible videotape format (digital preservation master tapes), the tapes were registered in the BFI National Archive technical record database. Thereafter the tapes were ingested by the project's encoding system (encoded – digitised to 'mezzanine' digital files). Subsequently, low resolution distribution copies (proxy digital files) were created from the mezzanine files by a process called transcoding. As is clear from the flow chart quality control was implemented at various key stages (for both material received from BFI's telecine contractors and from the encoding / transcoding process itself) to ensure that video and audio standards were being maintained. Likewise, once the material had been uploaded to the database server, filmographic metadata was also quality checked. The frequency of quality spot-checking was approximately 20%, although all video files were checked during the cataloguing process, so 100% quality control was applied at that point in the process.

User Engagement

13 Outreach

a The project's outreach programme plan sought to engage end-users, i.e. individual academic staff, researchers and students within discrete disciplines and institutions. The support and encouragement of the project's Advisory Group was crucial in this respect. The activity was accomplished by establishing and maintaining personal and email contacts through visiting

Higher and Further education establishments, giving presentations, emailing information out and distributing information about the project;

- Identifying and setting up user groups for the testing of the e-resource;
- Involving a range of academics, practitioners and PhD students in the project;
- Arranging meetings and giving presentations at HE/FE institutions;
- Attending / sending information to conferences;
- Assembling feedback from users from paper and online evaluations.

b The team's outreach activities were interrupted mid-term (summer and part of the autumn 2008) through maternity leave, although some of the ground was made up during late 2008 and the first nine months of 2009 as the outreach activities were continued into the project extension.

c The project's principal focus was on the following targeted disciplines:

- History
- Sociology
- Politics and International Studies
- Geography and Environmental Studies
- Social Work and Social Policy & Administration
- Economics
- Architecture and the Built Environment
- Town and Country Planning
- Law
- Educational Studies
- Health Studies
- Media/Film/Cultural Studies
- Journalism
- Anthropology

d Over 30 separate departments / institutions were visited during the course of the 2008 and 2009, plus several meetings were held at BFI premises and a number of conferences and seminars were attended, including:

- LSE
- Institute of Education, University of London
- Queen Mary, University of London
- Goldsmiths College
- Kings College London
- UCL

- History, Visual Culture (Art History) and Geography Departments, School of Sociology, School of the Built Environment, University of Nottingham
- History, Cultural Studies, Media and Sociology Departments, Nottingham Trent University
- Policy Studies (Politics, Criminology, Social Policy), Humanities and Drama (History, English and Drama) and Media Studies, University of Lincoln
- Department of History, Open University
- Film & Media Department, Birkbeck College
- Film & Media Department & History, University of Warwick
- University of Warwick Centre for Memory Studies
- History Department, University of Cardiff
- University of Ulster at Coleraine
- University of Cambridge
- University of Manchester
- History and Film Departments Manchester Metropolitan
- History and Cultural Geography Liverpool John Moores University, E-resources centre.
- Aston University, Birmingham - Department of Social Policy.
- History, Social Sciences, Media Studies, University of Bristol
- History & Media Studies, University of Glamorgan
- History, Humanities & Social Sciences, University of Exeter
- Film Studies, University College Falmouth
- History Department, University of Plymouth
- History, Film & Media Studies Chichester
- Geography, History, School of Creative Arts, University of Portsmouth
- School of Social Sciences & Film Studies, University of Southampton

e Conferences attended included the MeCCSA Annual Conference, Bradford, and the Nu Romantic Conference, Film, Theatre & Television Department, University of Reading

f Email and other contacts with academic institutions and academics, including visits to BFI by staff from Brunel, Nottingham, UCL and Warwick Universities, and RSC-NI

Implementation

The work was planned in functional stages, with several strands progressing in parallel.

14 Selection

a Selection work began immediately, once relevant team members were in place. This included developing an understanding of the broad themes and has been followed by a survey of material that has been held at BFI National Archive and has been potentially available to the project. An emphasis on diversity has been developed in order to show the range of materials held by the Archive as well as to deliver meaningful content to users. For this reason, BFI

decided not to select complete sub-collections unless there were overriding cultural reasons for doing so.

b Much of the material in range for selection by the project has been held by the BFI National Archive. However, a large proportion of it has been either not well understood, or only summarily catalogued. So this phase of the project has been very much a voyage of discovery. The discovery involved the need to view much of the material in order to assess whether it has been either going to be a useful addition to the project or, whether there would be factors that would rule it out, such as third-party copyright issues, quality and / or completeness of the original material, etc. Unlike other projects where complete collections are selected, almost at the press of a button, selection necessitates in-depth study and consideration before lists can be finalised. Selection has been inevitably going to be a time-consuming process, since not only relevance, but also diversity, quality and third-party considerations were factors that necessarily had influenced final decisions.

15 Legal issues

a Content licensing

i The process leading to conclusion of the licensing arrangements underpinning the content partnership was complex and protracted. Moving image material is a valuable commodity the value of which frequently endures long after original release or broadcast. With the increasing proliferation of distribution modes through which material can be made available to a paying public, many copyright owners are increasingly keen to develop opportunities to derive additional value or revenue from such assets. Consequently there is an increasing reluctance on their part to grant long term non-exclusive rights, such as up to the point where the material passes out of copyright. It was against such a background that BFI constructed the InView content partnership.

ii Each content partner negotiated with BFI individual content supply licenses that ultimately govern the terms under which their material is made available for use by the project. Project partners were pleased to make the materials available -- in some instances in perpetuity -- on a non-exclusive basis to UK higher and further education sector users, who, through their individual institutions undertake to use the materials responsibly and solely for educational purposes. However, negotiations revealed that project partners were not prepared to go further and release the material for wider usage, given that there were a range of interests that they sought to project, including control over their own material and protection of their commercial interests. The negotiation process was protracted and complex, and in some instances involvement in the project represents the first step that the content partner organisations have taken toward making their material available. In that sense there was a degree of confidence building that, it is hoped, will lead to future projects and to material being served with wider availability.

iii At a key stage in the project (Spring and Summer 2008) significant difficulties were experienced when the funder, reacting to proposals and questions emerging from key project partners regarding the detailed terms of participation, decided that several key partners could not continue to participate in the project. This decision caused the project considerable difficulty, since it threatened to severely diminish the volume of material that could potentially be available. It also caused the project to suffer a

tremendous loss of steam and focus, which was only slowly restored, once wiser counsels had prevailed and content partners' concerns had been satisfactorily addressed and accommodated by the funder.

iv Future video digitisation projects should ensure that they establish in advance with rights owners whether they will be prepared to enter into open-ended rights agreements before committing to delivery terms that may ultimately prove to be unachievable. This should include establishing whether any restrictions as to usage, branding and technical specifications will have any bearing on delivery as well.

b Appearance rights

A significant number of digitised assets selected by InView comprised interviews or panel discussions where participants' appearance rights needed to be cleared, since in their original iterations it was not clear that the scope of permissions previously granted could be extended to cover internet use. The process was protracted and was underpinned by indemnity and errors and omissions insurance.

16 Technical processes

a Evaluation and definition of standards

i Initial evaluation work has been carried out to establish both the standards that should be adopted for the digitised products, having regard to both JISC's published standards and those already employed by other projects and services (both JISC-supported and non-JISC supported). BFI has the benefit of having at its disposal an enormous amount of world-class technical expertise and talent in the both the film archive and video technology fields. Nevertheless, it has been considered useful that of developing technologies and operational techniques would usefully be surveyed in order to ensure that the solutions eventually adopted would not only be optimised, but would be of the greatest benefit to the BFI in the longer term. This involved not only a specially-commissioned consultancy, but also other less-formal conversations with acknowledged expert practitioners operating within the television, film, and information technology industries.

ii It has been ultimately decided that all of the moving image material should be ingested by the digitisation system from videotape; and that the system should be capable of handling at least HD Cam SR and Digital Betacam formats, but which could usefully be extended to incorporate other formats as well. It has been further decided to create a mezzanine, of digital sub-master digital file, from which the deliverable transcodings would be struck. This would not only enable BFI to create replacement deliverables, but also over time to create deliverables in different formats and to different specifications as required from time to time. The advantage of adopting this methodology has been that all of the digital proxy files would have been created from the same digital sub-master file. Parallel processing would be followed. This would essentially enable one encoding technician to operate two encoding machines in parallel, thus increasing the potential throughput.

iii The formats selected for use by the project were as follows:

		Mezzanine	**Stream**		**Download**	
Video	**Format**	MPEG-2 50-I	Flash	Windows Media	AVC	Quicktime

		Mezzanine	Stream	Download		
	Extension	.mpg	.flv	.wmv	.mp4	.mov
	Total Bitrate (kbps)	54,272	384	800	800	800
	Codec	MPEG-2, 4:2:2 sampling, I-Frame only	On2 VP6	Windows Media Video 9	H.264 MPEG-4 (AVC)	Sorenson Video Pro 3
	Bitrate (kbps)	50,000	320	704	704	704
	De-interlacing	No	Yes	Yes	Yes	Yes
	Frame Size (WxH)	720x608	384x288	384x288	384x288	384x288
Audio	**Codec**	AES3 LPCM (302)	MPEG 1 Audio Layer 3 (MP3)	Windows Media Audio 9	HE (High Efficiency) AAC	MPEG 1 Audio Layer 3 (MP3)
	Bitrate (kbps)	3,072	64	96	96	96
	Bits / Sample	24	22	16	16	16
	Number of Channels	4	2	2	2	2
	Sample Rate (kHz)	48	44.1	44.1	44.1	44.1

b Definition and procurement of the technology

The first steps had essentially defined the technology that has been considered to provide the best solution for the project. The next step has been to produce a user requirements document that sought to combine the essential technological capabilities required and to match them with the essential functionalities required by both BFI National Archive and the project team who would be using the systems. The technology has been divided into sub-sets of source tape decks (the project procured 2 HD Cam SR videotape decks), integrated encoding / transcoding equipment, storage equipment (RAID, plus back-up software and LTO4 autoloader data tape deck), and ultimately a digital asset management system within which the digitised files would be stored and managed in the long term.

c Implementation, testing and adjustments

Once the procurement processes had been completed a complex process of evaluation, testing and calibration of the equipment began. This has been complex because BFI National Archive's exacting technical standards needed to be complied with, as the equipment has been specifically to be integrated into its major systems, and also to ensure that the equipment not only complied with the procurement specification, but also has been finely calibrated to match the Archive's equipment. In addition, physical modifications to the Archive infrastructure were required in order to ensure that operating temperatures were kept within tolerances and safety thresholds. Accordingly, some additional air conditioning equipment has been required. In addition, modifications were carried out to BFI's IT systems in order to integrate the new software and databases within the BFI network.

d Full-scale production (digitisation)

i Installation and calibration took several weeks and involved the supplier's, manufacturer's and BFI's video engineers, software developers and technicians working on site in close liaison, in order to ensure that the supplied system has been optimised to meet BFI's needs. System calibration, testing and evaluation operated in parallel. Once that stage had been completed the project team began digitisation in earnest. Production rates during the first four weeks were modest as production has been carried out in parallel with in situ training. After this settling-in period the production

rate has been gradually increased to such a point that throughputs in excess of 12 hours (material running time) have been achieved on a number of occasions within a 7.5 hour shift.

ii Along the way there have been some equipment failures (Hard Disk Drives installed within the encoding equipment), power failures, leading to equipment damage (notwithstanding ups systems being in place) but these have not had any significant impact on the project as at least one of the parallel encoders has remained operational at any one time. Following close liaison with the system manufacturer the technical issues were resolved.

e Selection: surveying and understanding the archival content available

An initial stage involved carrying out a survey of what material the BFI National Archive had in its possession that might be of interest to the project and had already been subjected to preservation treatment. Some material has been identified, but this proved to be a very small proportion of the total ultimately used by the project.

f Film Preparation

i Assembling best quality source material. In many instances, where BFI National Archive holds several distinct copies of the material (either in whole or in part), the individual copies had to be assessed both by curatorial and technical archive team members before decisions could be taken as to what individual elements should be used in order to ensure that optimum quality sources were assembled individual titles. In a number of cases highly-flammable nitrate film stock has been processed, and that required very special handling.

ii Conservation and preparation. Once the material had been identified it required close visual inspection, cleaning, repair (in some cases) and other preservation interventions as part of the material's preparation for telecine transfer to high definition or standard definition video tape. Telecine transfer has been carried out by BFI's framework agreement contractors.

iii Quality Control: telecine transfer. After preparation telecine transfer the video tapes (either High Definition HD Cam SR or Standard definition digital betacam format) were quality assessed in order to ensure that the transfers were of sufficiently high quality to serve not only the uses of the project, but also the wider uses of the BFI National Archive.

g Video Preparation

i Some of the video material selected for use by the project team had originally been donated as original broadcast masters by television content partners. In other instances the material had been recorded off-air as part of the BFI's ongoing off-air television archiving process. In the case of Parliamentary material selected by the project team the original Parliamentary archive tapes were made available.

ii In a number of instances the material held by the BFI National Archive (particularly donated material) has been held in obsolete videotape formats (including 2-inch quad, 1-inch 'C' and D3 formats, as well as some material that has been held as VHS masters) and the originals needed first to be dubbed onto digital betacam videotape.

In some instances video tapes needed to be stabilised, cleaned or (in the case of some donated material) repaired before use.

iii Quality Control: video transfer. After preparation / dubbing the digital betacam videos were quality assessed in order to ensure that the transfers were of sufficiently high quality to serve not only the uses of the project, but also the wider uses of the BFI National Archive.

h Cataloguing and contextualisation of content

Once the content was digitised, cataloguing and contextualisation work was moved forward to completion. In many cases outline cataloguing, or something more substantial, had been created during the selection process. Contextualisation work was commissioned from and, in some cases by, the project's curatorial and editorial / QA team. In addition, broad thematic contextualisations were commissioned from external academic specialists. It was important that database resources were consistent and dynamic in order to ensure that the tasks were executed efficiently and effectively; and that management information was readily available for monitoring purposes. Descriptive metadata was originated and enhanced by curators via SIFT, BFI's national filmographic database, and key metadata was ultimately exported into Drupal (see web service below). Other metadata was originated in TecRec, BFI's national film & video technical database, and SIDX, BFI's national subject index.

i Asset management

i All material encoded by the project is held in a DAM (digital asset management) environment. The Digital Rapids encoding suite creates multiple versions: one high-bit rate 'mezzanine' format with near-preservation quality for future reuse, plus a number of transcoded low-bit rate formats for delivery online, as well as thumbnail images and encoding metadata reports. In order to retain connections between the files and allow the BFI's curators to manage them, they are imported into Artesia DAM (from Open Text Corporation).

ii The Artesia DAM Digital Rapids Import Adapter is a bespoke piece of software developed for the BFI by Open Text which is able to parse the encoding metadata reports produced by Digital Rapids. The adapter automatically ingests video files, images and encoding metadata produced by Digital Rapids into Artesia DAM and links them together. Artesia DAM therefore serves as the single point of management for all digital media files and their underlying information. It provides a web interface which BFI curators and archivists can use to find, access, re-use and distribute material encoded for the project. It also provides workflow capabilities which allow for centralised management and tracking of users' contributions to this and other BFI projects

j Web delivery BFI's InView and IT teams worked jointly to integrate digital assets and metadata for service through the InView website. Among other resources used were Drupal, an open source software content management suite which is supported by an open source database. InView metadata was sourced from SIFT, TecRec and SIDX and imported into the container database to be used by Drupal. Digital video and image assets for web use were also passed into the server system used by Drupal

k Log in and authentification InView has been integrated with the Shibboleth single sign-on system which is used for educational/academic content. This was achieved via a Drupal

module which was able to provide user authentication with Shibboleth (both v1.3 and v2.0) as well as some authorisation features (automatic role assignment based on Shibboleth attributes).

l Design and branding. The template design was delivered through the design team at BFI Southbank to ensure consistency with BFI branding and existing web templates. Appropriate user centred design techniques were implemented to ensure that the website was both easy to use and presented a coherent and engaging user experience for the disparate data sources being used.

m User research and analytics User testing was coordinated with the project's education co-ordinator and Google Analytics were The project's web team conducted user testing on the information architecture and the revised user interface of the InView site. The information architecture testing was designed to help clarify the language used in the navigation structure against the expectations of users. Using a series of simple guided tasks, the team explored how easily a set of representative users could find elements within the structure. The test of the user interface was a parallel piece of work, to interrogate clarity of the graphic design. Again, using a series of guided tasks, the web team asked users to find elements on the screen they might reasonably be looking for. In both cases the team measured the percentage success rate and the time taken to complete each task.

n The project has succeeded in selecting, preserving, digitising, contextualising and serving digital video and still image content via a web delivery resource that delivers contextualisation and descriptive filmographic metadata to users within UK higher and further education. Volume delivery targets have exceeded those originally agreed. The preservation work has produced real benefits for the national collection with the added advantage that some titles have been made available to academic audiences for the first time since their original release.

Outcomes

The project has delivered a resource that will undoubtedly benefit and interest the UK higher and further education community. That has already been established throughout he project's outreach activities.

17 Achievements

a Establishing an industrial-scale integrated video digitisation facility within the BFI National Archive

b Development of significant technical expertise in video digitisation at BFI National Archive

c Fuller curatorial understanding and appreciation of the titles selected for inclusion within the project

d Fuller and more accurate cataloguing of the titles in question, together with contextual information.

e Better understanding of the needs of higher and further education

f Delivery of more than planned of the target number of digitised assets.

18 Benefits

a Researcher benefits:

i Free and easy access to the digitised assets, obviating the need to travel to London to use expensive viewing facilities.

ii Democratised access to the resources enables researchers to view titles referred to in other studies for the purposes of critical review.

iii The availability of the resources will promote further the use of moving image materials within an academic context, which is long overdue.

b Teacher benefits

i Enables new and highly appealing referential material to be used within lectures, seminars and tutorials.

ii Offers a wealth of new avenues for study and exploration;

iii Represents a dynamic and stimulating resource.

c Student benefits

i Represents new and highly appealing referential material to be used within lectures, seminars, essays and tutorials.

ii Enables users to increase video and media literacy

iii Enables students to learn how moving images can be used to tell and retell histories and alternative histories.

Conclusions

19 Time needed to understand the resource

It is important for users of all levels to take time to ensure that they acquire a good understanding of the technical and cultural aspects of the source material, since only with careful study will the advantages and opportunities of the material be understood and grasped to the benefit of the educational resource.

20 Complex projects need detailed planning

Embarking on projects of this type is a Complex processes and time needs to be dedicated to enabling the processes and workflows to become established, particularly where there are complicated change management issues to be incorporated with cultural and operational imperatives.

21 Establish clear cultural and technological goals

It is important to take time to establish clear cultural and technological goals that are achievable within the timescale and the budget

Implications

22 Transferability

The methodology developed is one that can be applied to other film and video archives and embraces a range of formats. It has been tried and tested in BFI National Archive, and it is expected that it will lead to additional online access and extra content being made available.