

**‘Losing New Zealand's moving image heritage:
exploring the current state of audio-visual tape
preservation strategies in New Zealand.’**

by

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Abstract

Research problem

This study aims to address the gap in information regarding how New Zealand organisations housing audio-visual collections of heritage value are approaching the preservation of their aging magnetic tape collections. This study explores three main areas: the rationale/selection criteria being employed by organisations to identify audio-visual heritage items for digitisation; the extent to which New Zealand audio-visual repositories, with items of heritage value, have acknowledged the need for preservation and digitisation; and the values and barriers of a collaborative national audio-visual digitisation programme designed to improve the chances of survival of this material.

Methodology

In order to address the research problem, this study uses a mixed methodology, employing a selective, or non-probability, sampling model. Five organisations were deliberately chosen as they hold the bulk of New Zealand's audio-visual heritage material. The research was then conducted using a multiple case study, whereby professionals from participating organisations were asked to complete a survey which was followed up with written contact via email for clarification.

Results

Four out of the five selected organisations participated in the study. The results showed that while all participating organisations had differing motivations for digitising collections all acknowledged the need for preservation. All respondents confirmed they have an audio-visual digitisation programme in place and are carrying out digitisation work on their tape-based material. All organisations are also facing similar and shared challenges relating to the preservation of their tape-based material, including lack of playback equipment, mechanical damage of carriers, storage issues, and issues related to cataloguing.

Implications

This study provides a picture of the current situations faced by New Zealand organisations housing audio-visual collections of heritage value and sets the scene for a exploring the value of considering a national collaborative preservation programme to encompass all heritage film and sound collections stored in New Zealand repositories. This research has the potential to offer data that may improve the progress of discussion around assisting organisations, from all sectors housing audio-visual collections of heritage value, who may be disadvantaged through lack of resources, access to specialised staff and/or shortage of obsolete equipment.

Keywords: audio visual, preservation, digitisation, magnetic, tape, footage, moving image.

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1. Introduction

... *“moving images are an expression of the cultural identity of peoples, and because of their educational, cultural, artistic, scientific and historical value, form an integral part of a nation’s cultural heritage”*.

UNESCO Recommendation for the Safeguarding and Preservation of Moving Images (1980, p.159).

Worldwide audio-visual heritage material is under increasing threat of being lost forever. With the declining demand for analogue technology equipment, comes reduced manufacture of machines, parts and the loss of technological expertise. Issues include both degradation of carriers and the challenges of acquiring and maintaining playback equipment. We are faced with a rapidly closing window of opportunity to preserve analogue audio-visual material. This problem has been emphasised in multiple recent publications (Casey, 2015, Library of Congress, 2012; National Film and Sound Archive of Australia, 2015). Research by the American Library of Congress and Casey (2015), estimates that this timeframe ranges from between 15 to 20 years, while the National Film and Sound Archive of Australia (NFSA) believes that we may lose all magnetic tape not digitised by 2025 (2015, p.3).

In 2005, UNESCO estimated that world audio-visual holdings totalled approximately 200 million hours. Preservation of this valuable heritage material is vital to ensure that it remains accessible to future generations. Fortunately, audio-visual material can be preserved and remain accessible by migrating the content from obsolete carriers to current supported carriers (Edmondson, 2016). The most effective, and some suggest only way to achieve this, is through digitisation (UNESCO, 2012, p.1).

Digital preservation of audio-visual material has been underway worldwide since the 1980’s with the increased call for the preservation of significant audio-visual collections, as exemplified by UNESCO in the 1980 *Recommendation for the Safeguarding and Preservation of Moving Images*. This document officially recognised that “...moving images are an expression of the cultural identity of peoples, and because of their educational, cultural, artistic, scientific and historical value, form an integral part of a nation’s cultural heritage” and was the first to formally acknowledge the urgency with which heritage organisations need to react before material of this type is lost (p.1).

This research aims to examine the audio-visual preservation problems facing New Zealand organisations housing aging tape-based content of heritage value. Knowledge around condition and preservation progress of this material is seriously lacking in the New Zealand context. The intention of this study is to examine the work being undertaken by organisations with audio-visual collections, and

to develop a picture of the current state of audio-visual tape preservation strategies in New Zealand. It will also examine factors that contribute to digitisation selection, and the motivations driving the profession to secure continued access of New Zealand's audio-visual heritage items. Additionally, this research explores the value of considering a national collaborative preservation programme to encompass all heritage film and sound collections stored in New Zealand repositories. It is hoped that this research offers data to improve the way institutions with audio-visual collections access and make use of preservation avenues and resources, to increase the chances of survival of at-risk material. It is also hoped that this research will assist institutions at all levels, who may be disadvantaged through lack of resources or specialised staff and equipment, to access assistance, solutions and advice. This study may also benefit knowledge and practice by informing public collection and preservation institutions about specific needs and expected lifespans of specialised items, to allow institutions to use funding and resources more effectively.

2. Definition of Terms Used

2.1 Audio-visual Archive

There are many definitions of an audio-visual archive organisation, but the following one has been selected for this study as it encapsulates all the characteristics of an audio-visual archive that are vital for understanding their role and purpose. “An audiovisual archive is an organization or department of an organization which has a statutory or other mandate for providing managed access to a collection of audiovisual documents and the audiovisual heritage by collecting, preserving and promoting” (Edmondson, 2016, p.28).

2.2 Carrier and Media Descriptors

Both the terms carrier and format are used interchangeably to describe the physical component that houses the media. Different terms are used to describe and identify objects that contain audio-visual content. This is often related to the format, or the way the information is encoded on the file, for example, magnetic formats, like those housed on open reel and cassette tape and disc formats includes floppy and hard-disk formats, Compact Disc (CD) and Digital Versatile Disc (DVD) (Edmondson, 2016).

2.3 Conceptual Descriptors

There are several different ways of describing sound and moving images. The following definitions will be used in this study:

- Content - sound and moving images housed on or in the carrier (Edmondson, 2016).
- Audio-visual - describes both moving image and sound. It is the term accepted by UNESCO to encompass film, television and sound archive material.
- Digital - computer readable binary code.
- Analogue - signals stored in and on a carrier, considered the opposite of digital (Edmondson, 2016).

2.4 Preservation and Access

Preservation is imperative to ensure continued access, they are “two sides of the same coin” and according to Edmondson is the “...totality of things needed to ensure the permanent accessibility” (2016, p.23). Additional terms used related to preservation include:

- Degradation - the deterioration of material that makes up recording format used to store recorded material, for example BetaCam tape, VHS, DVD-R and Acetate film.
- Digitisation - the conversion or migration of analogue material to a digital format.

2.5 Significance and Value

Items with value or significance are assigned meaning and importance with relation to history, culture and environment (Dorner and Young, 2004). Significance can be defined as "...the values and meanings that items and collections have for people and communities" (Collections Council of Australia, 2009).

3. Literature Review

This review discusses key literature relevant to digitisation of tape-based materials in audio-visual archives. As there is a lack of literature presenting research into the New Zealand context, much of the literature is taken from a European perspective. Advanced internet searches proved useful to discover items of interest taken from New Zealand mainstream media publications. Additionally, unpublished work from the University of Victoria's ResearchArchive, Te Puna Rangahau offered useful research from the New Zealand context including Thompson's (2008) report.

Much of the work presented in this review is research from the last decade, aside from the surveys of data presented by Klijn and Lusenet (2008) and Schuller (2008), who both published in the framework of the TAPE survey questionnaire which has strongly influenced the survey employed in this study. The important guiding document published by UNESCO in 1980 *Recommendation for the Safeguarding and Preservation of Moving Images* was also consulted for this review, despite the age of this article it remains the principle reference document for moving image archives.

3.1 Surveys of data

Since UNESCO published its *Recommendation for the Safeguarding and Preservation of Moving Images* in October 1980, there has been an acknowledgement of the urgency with which heritage organisations need to react in order to save this material. The article recognised that "...moving images are an expression of the cultural identity of peoples...and forms an integral part of a nation's cultural heritage" (1980, p.159).

Internationally, studies which explore the extent of digitisation of heritage audio-visual material are heavily drawn from a European sample. For example, the project by Klijn and Lusenet (2008), funded under the Culture 2000 Programme of the European Union and run between 2004 to 2008, drew on data from a survey 374 organisations (from 34 European countries), including archives, libraries and museums holding audio-visual collections. The survey provided information on collection sizes and condition and showed that a wide variety of organisation types hold audio-visual material in their collections, a high number of responses from organisations with audio-visual material indicated that professionals were becoming more aware of the unique and pressing requirements of audio-visual collections.

Klijn and Lusenet (2008) included audio-visual material housed outside specialised audio-visual archives or broadcast institutions in their European study and this drew attention to the large amount of heritage audio-visual material housed outside of specialised archives. The study highlights how

vital it is to consider these items as part of the national collection. Schuller (2008) also analysed the state of Film Heritage Institutions in Europe to identify and propose solutions to improve access. Multiple research methods were used for this report including several TAPE (Training for Audiovisual Preservation in Europe) surveys, case studies and meetings, informal workshop discussions, visits to audio-visual archives and a study on Austrian audio-visual collections.¹ From this research Schuller also identified the primary issue faced by these outside collections is they are often left out of academic and institutional research and national discussion. Both Schuller (2008) and Klijn and Lusenet (2008) believe the potential benefits of digitising, will only be fulfilled with more support for these minority collections held in small isolated collections. The Klijn and Lusenet (2008) report also highlighted reasons for digitisation delays, including deteriorating material, obsolete equipment, cataloguing backlogs and lack of expertise.

Klijn and Lusenet (2008) and Schuller (2008) both published in the framework of the TAPE survey questionnaire and following on from this successful survey, Laas (2011) published research from Iceland based on a modified version of the TAPE survey questionnaire. Laas' used qualitative research methods in her study of ten audio-visual archives and collections caring for the bulk of Iceland's heritage audio-visual material. Much like the other two reports, original statistics and material were collected by conducting interviews with professionals from the audio-visual collections, ranging from a major broadcast archive to minor collections with no staff. Focused one-hour interviews were employed as the primary data collection tool to conduct interviews with the staff of the selected audio-visual collections. Laas' finding highlighted a lack of financial support and staffing as the main barriers to digitisation of collections.

A further study by Nauta and van den Heuvel (2015) reports on findings from the fourth ENUMERATE survey (Core Survey 3, 2015), a major bi-annual study into the current state of digitisation in Europe. This study follows the original 2008 survey, the 2011 (Core Survey 1) and the follow-up 2013 (Core Survey 2.) The Surveys are funded under the European Union Competitiveness and Innovation Framework Programme and about 1,000 institutions participate from 31 European countries. The report uses a qualitative raft of approaches to measure digitisation effort including a detailed survey, which asks questions about the organisation's collections, digitisation activity, digital access, digital preservation strategies and cost allocation to digital projects. The survey covers all areas of heritage collection and includes audio-visual information gathering with 17 audio-visual specific archives and 4 film institutes taking part. There are very few studies which explicitly explore audio-visual digitisation

¹ TAPE (Training for Audiovisual Preservation in Europe), was a three-year project funded under the Culture 2000 programme of the European Union. Designed to raise awareness and training by carrying out research, publications and workshops. TAPE focuses on audio-visual collections held outside the major national institutions with specific responsibilities for audio-visual heritage.

to this extent and this example also provides a greater understanding of the audio-visual archiving landscape.

The New Zealand National Digital Forum (NDF), also conducts national surveys to gather information related to the state of digitisation in New Zealand. Surveys have been carried out in 2013, 2014 and 2016. While Nga Taonga (formerly the NZ Film archive) is included in the survey, film and audio specific collections are not treated as a separate organisation type. The survey results show an overwhelming focus on photographic and manuscript material. Survey results for digitisation of audio-visual collections were disappointing, with only 3% planning digitisation of film material and 7% audio material. While this survey is a useful starting point for understanding the state of archival digitisation in New Zealand, it provides very limited information related to digitisation of different audio-visual formats. This survey highlights the gaps in understanding of the audio-visual archival situation in New Zealand.

3.2 Preservation and access

Many recent publications are presented with a real sense of urgency behind their call for digitisation, especially regarding magnetic tape collections (Casey, 2015; Edmondson, 2016; NFSA, 2015). For example, the National Film and Sound Archive of Australia (NFSA) paper *Deadline 2025: Collections at Risk* states that magnetic tape not digitised by 2025, maybe lost forever (2015, p.3). Other national organisations have made similar claims including the American Library of Congress (2012) and Casey (2015) who both estimated a survival timeframe ranging from between 15 to 20 years. The Canadian Conservation Institute (2012) are committed to digitisation as the “best option” to ensure items, including magnetic tape remain accessible. They state there is “...effectively no alternative as there are no analogue formats that are widespread, cost-effective, and have any significant expectation of future support” (Canadian Conservation Institute, 2012, p.6). In fact, UNESCO state that “...digital preservation should be a development priority, and investments in infrastructure are essential to ensure trustworthiness of preserved digital records as well as their long-term accessibility and usability” (UNESCO, 2012, p.2).

In her report on archive condition and awareness of the specific needs of audio-visual preservation Lass (2011) highlighted the issues from an Icelandic perspective. The report concludes that if no action is taken, collections will be pushed outside of the mainstream heritage digitisation movement. She asserts that a lack of financial support and staffing are the main barriers to digitisation of collections, and she calls for Icelandic authorities to acknowledge the need for comprehensive policies and practical measures to ensure the preservation of Iceland's audio-visual heritage.

The Canadian Conservation Institute and NFSA have both released reports on the serious issues facing magnetic tape, arguing that this media format will be inaccessible in the very near future as playback machines and technical skills are lost and specialised staff retire. NFSA believes that unless action is taken quickly, we will see a 'second mass extinction'. These reports outline how vital it is for stakeholders and organisations themselves to acknowledge the need to react with urgency before material is lost due to lack of funding, aging equipment and loss of expertise required to carry out digitisation (Canadian Conservation Institute, 2012, p.6).

With reference to the BBC collection, Wright (2009) outlines general preservation problems faced by audio-visual archives and also refers to data from the TAPE surveys. He stresses the need for a holistic approach to preservation planning, and respect for general principles of preservation informed by a strategy. He outlines the importance of building effective business cases in order to get funding and advocates for a "detailed roadmap" outlining the strategy and choices for migration from old formats to new. Schuller's (2008) report also asserts the importance of holistic planning and identifies five main proposals for action including mandatory collection policies, preservation standards, restoration research, accessibility, and training and education.

Wright (2009), also outlines 'new' digitisation issues. Digitisation is not a magic bullet, and debate related to mismanaged digitisation programmes requires continued dialogue and further research (Edmondson, 2016). However, there is little doubt that migration to digital formats will ensure issues related to physical degradation, carrier deterioration, chemical instability, and the increasing lack of access to aging equipment is mitigated. Digitisation also allows archives to provide increased access to analogue collections, ensuring survival beyond the projected 15 to 20-year deadline suggested by some professional organisations (Edmondson, 2016).

3.3 The New Zealand Context

There is little academic dialogue regarding the digitisation of audio-visual content in the New Zealand setting. However, there has been some public interest in the digitisation progress of the TVNZ magnetic tape collection by Nga Taonga, sound and vision archive of New Zealand. Nga Taonga receives government funding to support, among other projects, its efforts to digitise the TVNZ collection. It has received approximately 1.3 million each year since 2014 (Nga Taonga, n.d.) and this issue remains of public interest. Discussions have reached the mainstream media, including Radio NZ and Public Address (Nga Taonga, 2018; Pennington, 2017; AuntDaisy, 2016) following recently

released Official Information Act (OIA) requests to TVNZ, Jacinda Ardern and the Ministry for Culture and Heritage regarding the institution's digitisation efforts.²

Thompson's (2008) unpublished research paper employs a qualitative evaluation to assess the size, scope and suitability of digitisation strategies used by libraries in New Zealand to ensure the preservation of natively digital objects held in physical form. Alexander Turnbull Library is used as a case study as it is the "central heritage library in New Zealand". The author's theoretical position is drawn from an assertion that "structured institutional strategies" are vital to long term digital preservation, as opposed to ad-hoc responses. He proposes development of a "National Digital Heritage Archive" to provide develop a long-term strategy to preserve functionality of heritage digital objects arguing for the need for a collaborative programme for digitisation in New Zealand. It seems Thompson's proposal foresaw, either knowingly or unwittingly, the implementation of the National Library of New Zealand's National Digital Heritage Archive (NDHA) in October 2008 (National Library of New Zealand, 2019).

3.4 Collaboration

Thompson's (2008), outlines the for the need to consider material of heritage significance as part of a wider collective digitisation project. His calls for a collaborative programme of digitisation in New Zealand is backed by significant international research and examples to suggest that cooperation at a national level can be used as a tool for improving the current overwhelming digitisation backlog (Library of Congress, 2012; Schuller, 2008; Zorich, Waibel and Erway, 2008).

Schuller (2008) analysed the state of Film Heritage Institutions across Europe to identify and propose solutions to improve access to collections. Schuller ultimately identified the primary issue impeding preservation and digitisation efforts as dislocation. With many items housed outside of specialised archival institutions, in private collections and scattered across institutions in small collections within larger organisations. Schuller asserts that collection "critical mass" is essential to ensure effective preservation standards and, ideally audio-visual heritage material should be housed in specialised archives. However, as this is not possible, Schuller advocates for cooperative models as the only viable framework to safeguard these items against the threat of extinction.

The Mazzanti (2011) study used qualitative research, including questionnaires, online consultation, public workshops and interviews to receive input from more than 100 institutions and individuals located in 17 European countries and the United States. Like the previous study, this research also

² Further information can be found regarding the multiple official information requests can be researched at <https://fyi.org.nz/request/6578-tvnz-archive-material>

highlighted the challenges posed by the individual characteristics each organisation. The report points out that differences in size, mandate and resourcing, affect an institutions ability to carry out their role of collecting, preserving and providing access to their audio-visual collections. The study is based on a theoretical position that “cinema is worth preserving for the future, and it is worth being given access to.” This study also calls for the Open Archive Information System (OAIS) approach to be adopted by organisations with audio-visual collections, as it has been by other cultural heritage organisations and libraries. They believe that collaboration of this kind will ensure the adoption of common terminology, standardised formats, effective and more frequent migration transitions and the benefits of advance planning.

The Zorich, Waibel and Erway (2008) study explores the nature of library, archive and museum (LAM) collaborations, to help LAMs collaborate on common services and experience greater outcomes. Their continuum model is cited as influential in Chigariro’s work *Collaboration in the management and preservation of audio-visual archives: a case study of the National Archives of Zimbabwe* (2014) to identify benefits and risks of collaborative work. Chigariro (2014) found the advantages of organisations with common goals engaging in collaborative digitisation projects, to foster innovation, exchange information, expand knowledge and share resources.

Chigariro (2014), uses the audio-visual unit of the National Archives of Zimbabwe (NAZ) as a case study to investigate the impact of collaborative efforts and practices for preserving audio-visual material. Collaboration theory is used to analyse the different collaborative activities the NAZ are involved in and Chigariro’s underlying assumption is that collaboration can help in the effectiveness of audio-visual preservation efforts. Using a “mixed method methodology”, including document analysis and interviews with staff from the audio-visual unit, Chigariro found that the NAZ unit practised collaboration to assist with the challenges of managing and preserving audio-visual archives, including digitisation.

As part of a strategy for greater collaboration the American Library of Congress has developed a *National Recording Preservation Plan* to provide a “blueprint to implement a comprehensive national sound recording preservation program,” as mandated in the National Recording Preservation Act of 2000. The plan calls for the establishment of “consortial digital repositories and agreements between institutions” (Library of Congress, 2012, p.1). They assert that collaboration reduces start-up costs and assists with longer term operating costs. Especially regarding smaller heritage organisations that lack the resources to manage preservation as well as to provide and maintain access (Library of Congress, 2012). The NSFA also propose a collaborative approach, they state there is an increasing consensus among audio-visual archives internationally, that the audio-visual archiving community is not able to complete the vast amounts of digitisation before it becomes obsolete.

3.5 Conclusions from Literature

Studies reviewed here present common ideals around the urgency for action with benefits of digitisation as means of audio-visual preservation and continued access. A number of reports and national organisational recommendations have called for the use of national strategies and collaboration to achieve preservation goals. This is significant with relation to this research as obsolescence is an issue seriously threatening the preservation and access to New Zealand audio-visual heritage. This research gives credence to the proposal that organisations begin to investigate the benefits of working collaboratively to ensure significant material is not lost. Conclusions from the literature examined imply that multiple advantages may be experienced through the sharing of expertise, planning, strategy, workflow and resources.

4. Research Questions

The intention of this study was to gain insight into the work being undertaken to ensure preservation and continued access to New Zealand's audio-visual heritage items, and to explore the motivations driving digital preservation decision-making. These insights will assist in investigating the value of a national collaborative preservation programme/plan to encompass all heritage film and sound collections stored in New Zealand repositories. This study will aim to answer the principal guiding question of "How are New Zealand organisations housing audio-visual collections of heritage value approaching the preservation of their tape collections?" Three sub questions will guide this research:

- 1) What rationale/selection criteria is being employed to identify appropriate audio-visual heritage items for digitisation?
- 2) To what extent have New Zealand audio-visual repositories, with items of heritage value, acknowledged the need for urgency in the development of clear policies and practical measures for preservation and digitisation?
- 3) What are the perceived values and barriers of a collaborative national audio-visual digitisation programme designed to improve the chances of survival of this at-risk material?

The study will focus on organisations with audio-visual collections preserving footage, film and all other audio-visual items. This study will not include photographic collections. The emphasis is given to organisations that have collections made up of unique New Zealand content, including organisations that function as repositories for significant material.

5. Research Design

Developing a picture of New Zealand's audio-visual archive holdings and preservation progress is a complex task. Primary research for this project was informed by content analysis through an investigation of current literature regarding the international audio-visual digitisation situation, as there is little current literature to consult within the New Zealand context. Both qualitative and quantitative approaches have been taken, with quantitative data taken from the research survey, as well as the last three NDF surveys and from a selection of international surveys (Klijn & Lusenet, 2008; Laas, 2011; Nauta & Heuvel, 2015; NFSA, 2015). However, additional data also come from qualitative responses gathered from survey answers and written clarification from individual participants. This qualitative data was important, as the population (or sample) of organisations appropriate for study is small-scale so statistical generalisation is problematic.

6. Research Methodology

This study employs a selective, or non-probability, sampling model. The organisations have been deliberately chosen because they hold the bulk of New Zealand's audio-visual heritage material. The research has been conducted using a multiple case study, professionals from four out of the five organisations participated by completing a survey followed by written contact via email for clarification of some points.

6.1 Multiple Case Study

The use of the multiple case study enabled comparison and contrast between cases. The framework for the collection of quantitative data was formed around closed and open-ended questions asked initially in the form of an online survey, see appendix 4. Then participants were invited via email to elaborate or clarify answers given. As Leedy and Ormrod (2013) attest, conducting qualitative study allows the researcher to select purposefully to ensure responses from “individuals or objects that will yield the most information about the topic under investigation” (p.152).

6.1.1 Survey and follow-up contact

Participants were asked to complete an online survey; interviews were not possible, therefore follow up contact was made via email correspondence. The survey contained both closed and open-ended questions based on both the TAPE questionnaire (Klijn & Lusenet, 2008) and the digitisation activity section of the fourth ENUMERATE survey (Core Survey 3, 2015). While the surveys were designed in the European context, they fit well with the New Zealand setting as technology and terms used are identical. However, updates were added to include advances to cloud-based mass media storage solutions. Both surveys use a qualitative test of approaches to gather information about organisation's collections, digitisation activity, digital access, digital preservation strategies and cost allocation to digital projects.

During the research planning stages considerations were given to the probability that not all organisations would be willing or able to participate in a follow-up interview, therefore the questionnaire was designed in a way that allowed qualitative data to be gathered in addition to the quantitative data, with sections for free text answers. The questionnaire was developed with the use of Qualtrics Survey Tool and to allow participants to fill it out at a time convenient to them. While the questionnaire gathered significant quantitative data regarding collection size, percentage digitised and rate of digitisation per year, quantitative digitisation data has also been drawn from the NDF surveys 2013, 2014 and 2016.

Follow-up contact was made with all participants after completion of the survey, respondents were asked to expand upon, or clarify answers given in the survey.

6.1.2 Population and sample

Five organisations were chosen for this study as they represent a mix of public, and private collecting institutions, as well as national broadcasters with significant audio-visual collections. Four out of five of the organisations participated in this research.

- Nga Taonga Sound and Vision (including the TVNZ collection)
- Archives New Zealand (The New Zealand National Film Unit)
- Maori Television Library
- Mediaworks News Archive
- The Chapman Archive, University of Auckland

Nga Taonga is the national audio-visual archive and receives a bulk of its operating budget from a Government fund allocated by the Ministry of Cultural and Heritage. Nga Taonga is also the repository for the Television New Zealand TVNZ collection and all New Zealand on Air (NZ on Screen) funded projects and specialises in the collection and care of audio-visual taonga of Aotearoa, New Zealand. Archives New Zealand houses a small but significant New Zealand heritage collection that has been partially digitised or migrated (Archives New Zealand, n.d.). This material significant in that it is legislatively protected under the Public Records Act (2005). While the other organisations are departments within broadcast organisations or educational institutions. All participants were staff acting in senior collection management roles.

Organisational identity is kept confidential in this report. However, contextual data about the organisations such as, size, type and funding situation has been included. Numbers have been assigned to each organisation to allow for distinction in reporting. Individual ethical considerations are discussed below.

6.1.3 Ethical considerations

As this research involved surveys and potential interviews with people representing organisations, it required ethical approval from the Victoria University's School of Information Management Human Ethics Committee (HEC). Detailed information was provided to each participant via email (appendix 1) with attached information sheet (appendix 2) outlining the purpose of the research, general data

collection areas and communication regarding how the data would be published in order for the participant to provide informed consent (see appendix 3).

All participants were required to indicate consent at the beginning of the survey. Information provided also detailed that participation was voluntary and outlined the individual rights to withdraw at any stage during the research before data analysis. Participants were informed of their right to privacy and confidentiality, and measures were taken to ensure that privacy. Participants were informed of how their data will be stored, protected and used, as well as methods of information retention and deletion.

6.1.4 Data collection and analysis

To gather data related to the questions outlined in section 4, a focused questionnaire was chosen as the primary data collection instrument. Using a qualitative test of approaches to measure digitisation efforts (appendix 4). Participants were invited to complete a survey on behalf of their institution. Questions centred around audio-visual tape collections, digitisation activity, digital access, digital preservation strategies and cost allocation to tape digitisation projects. The survey was developed with the use of the Qualtrics Survey Tool. Benefits of this survey tool include a simple user interface and advanced analysis tools. Following the completion of the survey, participants from the organisation were invited to participate in a semi-structured in-person interview to elaborate on their answers. However, time restrictions following delays in completion of survey and a subsequent stay in the collation of data made interviews impractical. However, further clarification was gained via email correspondence.

Survey and follow-up correspondence questions have been collated, analysed and compared (appendix 5). The information is a mix of qualitative and quantitative results, analysis has been carried out by collating information for each individual organisation. This is presented anonymously and organised into following themes:

- Collection focus
- Collection size
- Digitisation behaviour and focus
- Opportunities/challenges affecting digitisation progress
- Storage facility and conditions
- Quality of cataloguing
- Staffing and professional knowledge

Observations and generalisations have been taken from the results as a whole. Analysis of the collated data enabled the identification of themes and patterns which allowed for the development of insights that relate to the overarching research question “How are New Zealand organisations housing audio-visual collections of heritage value approaching the preservation of their tape collections?” and the three sub questions outlined in section 4.

6.1.5 Limitations

- This study is confined to institutions in New Zealand with audio-visual tape collections. This means the pool to gather data was small and results were affected by non-participation of one of the selected institutions.
- It would have been preferable to carry out interviews with participants following the completion of the survey, it was beyond the control of the researcher to organise interviews inside the deadline due to delays in participant responses. Follow up correspondence was therefore used in its place.

7. Results

7.1 Organisation 1

7.1.1 Collection focus

Organisation 1 belongs to the archive sector and has legal responsibilities for collecting and keeping audio-visual materials. Organisation 1 identified all audiences as extremely important target audiences of the institution.³

7.1.2 Collection size

While Organisation 1 cannot predict what items may be included in the collection in the future, they have low expectations that the current collection of audio-visual materials will increase. All audio-visual materials are currently managed and stored in house by Organisation 1, collection size in hours is presented in table 1, this collection is made up with a number of 'many other formats' further clarified as 1 inch open reel video tape (218 hours) and 2 inch open reel video tape (236 hours). Multiple other formats were explained as audio-only formats.

Table 1: Organisation 1 collection size in hours

Format	Hours
VHS	>=1000 <5000
S-VHS	0
U-matic	>=1000 <5000
Betacam SP or SX	>=50 <500
Betacam Digital	<50
Video8/VideoHi8	<50
DV/Digital8	0
Other - Please explain	>=5000 <50,000 "Many other formats"

³ Audiences included the general public, academic researchers, students, publishing/media and other commercial users.

7.1.3 Digitisation behaviour and focus

Organisation 1 is currently undertaking a digitisation project and estimates that 10% of the collection is currently digitised. They approximate the yearly rate of digitisation in items "...with one full time Film and AV Specialist we can transfer 250-450 items per year" but take care to note that "there were two years in the last five when we did not have a Film and AV Specialist on staff".

Reasons identified for carrying out digital preservation were ranked as follows, extremely important for relieving stress on fragile carriers and extremely important to save the contents of carrier due to lack of playback equipment. Access for users was not identified as a significant priority during this survey.

All digitisation work is carried out in-house and no preservation work is currently outsourced.⁴

Organisation 1 has separate master and viewing/user copies for some items that have been digitised. Digitised material is stored in a digital mass storage system with backup copy. Analogue originals are retained after digitisation. Digitised items held in the collections of Organisation 1 can be accessed via Internal workstation/network on site and low-quality copies for viewing and downloading are available from their website. Copies are also made on request and available through third parties that distribute them.

When tape originals begin to deteriorate Organisation 1 digitise the effected items (except cinematic sound are transferred to polyester). Organisation 1 produce uncompressed and uncorrected archival masters, digitising video (non-film) to AJA V210 codec with a .mov file format. However, they are "...looking into FFV1 as an alternative as it may be easier to handle in the long run".

7.1.4 Opportunities/challenges affecting digitisation progress

Organisation 1 has preservation programme in place for audio-visual tape collections. Complications regarding legal rights issues not generally an issue for Organisation 1.

7.1.4.1 Storage facility and conditions

Organisation 1 identified the general description of the collection as deteriorating. Specific problems identified as affecting tape collections were, storage with a lack of appropriate storage conditions as the highest priority. Issues related to mechanical damage, vinegar syndrome, playback equipment

⁴ Preservation work identified in the survey included conservation, transfer of carriers, cleaning and digitisation.

shortage and quality of cataloguing were ranked as moderate priority. Organisation 1 does not store the collection in “best practice” climate-controlled conditions.

7.1.4.2 Quality of cataloguing

Approximately 95 percent or greater of audio-visual collections held by Organisation 1 have been electronically catalogued with 5 percent or less not described or catalogued. The representative for the organisation identified the collection catalogue and metadata standard to be adequate, requiring very little work in updating or complementing during the digitisation process. This electronic catalogue can be accessed by the public via the internet.

7.1.4.3 Staffing and professional knowledge

Organisation 1 has one staff member working with audio-visual materials, with a second member working occasionally, who is not full time equivalent (FTE) staff. Organisation 1 also has recent access to staff who have been professionally trained to work with audio-visual materials. Playback equipment is not regularly serviced.

7.2 Organisation 2

7.2.1 Collection focus

Organisation 2 belongs to the library sector with no legal responsibilities for collecting and keeping audio-visual materials. Organisation 2 identified academic researchers and student audiences as extremely important target audiences of the institution. With the general public considered moderately important and publishing/media as slightly important.

7.2.2 Collection size

Organisation 2 are not actively collecting tape-based material. However, they cannot predict what items may be deposited into the collection in the future. Audio-visual materials are stored partly offsite by organisation 2, collection size in hours is presented in table 2, with VHS presenting the bulk of this collection.

Table 2: Organisation 2 collection size in hours

Format	Hours
VHS	>=50,000
S-VHS	0
U-matic	>=500+ <1000
Betacam SP or SX	>=50 <500
Betacam Digital	>=50 <500
Video8/VideoHi8	<50
DV/Digital8	>=500+ <1000
Other - Please explain	N/A

7.2.3 Digitisation behaviour and focus

Organisation 2 is currently undertaking a digitisation project and estimates that 80 percent of collections identified for preservation have been digitised, with around 50 percent digitisation of all tape content digitised, regardless of the digitisation plan. Organisation 2 estimates their yearly digitisation rate as approximately “1800 tapes holding 5400hrs of content per annum” this is possible as they have “...4 x VHS/SVHS capture stations running simultaneously.”

The main reasons identified for carrying out digitisation were ranked as extremely important for creation of access copies for users and to save the contents of carrier due to lack of playback equipment. Digital access to browsing material online and onsite was ranked as very important. Continued preservation to relieve stress on fragile carriers was ranked as moderately important.

Cataloguing, web access development and carrier migration is carried out in-house. Other digitisation work is carried out using a mix of external provider and in-house processes. Including selection and preparation, processing of files to make access copies, storage and conversion from analogue to digital. Preservation work is not currently outsourced, and some work is done onsite, for example, when tape originals begin to deteriorate Organisation 2 stabilise the source material for example “by cleaning/baking etc as best suits specific problems” then they digitise the item.

Organisation 2 has separate master and viewing/user copies and digitised material is stored in a digital mass storage system with backup copy. Analogue originals are retained after digitisation. A catalogue of digitised items held in the collections of Organisation 2 can be accessed by the public online, with high-quality viewing copies available to individuals with membership access to the institution’s website.

Organisation 2 does not produce uncompressed and uncorrected archival masters. This is due to the “...quality of the VHS masters combined with resource constraints and non-unique nature of most content means we opted for lossy MPEG2 compressed masters rather than lossless JP2 compressed masters. For more unique tape-based content we use DV compressed AVI files”. Preferred formats for access copies are “MP4 (h.264/AAC-LC) files at various quality levels for adaptive bitrate streaming.”

7.2.4 Opportunities/challenges affecting digitisation progress

Organisation 2 has preservation programme in place for audio-visual tape collections. Complications regarding legal rights are an issue for Organisation 2.

7.2.4.1 Storage facility and conditions

Organisation 2 identified the general condition of the collection as good. Specific problems identified as affecting tape collections were, storage as a moderate priority and mechanical damage, vinegar syndrome, playback equipment shortage and quality of cataloguing as low priority. Organisation 2 stores the collection under climate-controlled conditions.

7.2.4.2 Quality of cataloguing

Approximately 90 percent or greater of audio-visual collections held by Organisation 2 has been electronically catalogued with 10 percent not described or catalogued. The representative for the organisation identified that a lot of time must be spent optimising the collection catalogue and metadata, it was mentioned that due to the amount of description detail missing “we prioritise enhancing parts of the collection and leave other parts with ‘skeleton records’.” Organisation 2 use MARC 21, Dublin Core and PB Core as standards for cataloguing/description/metadata. This catalogue can be accessed by the public via the internet.

7.2.4.3 Staffing and professional knowledge

Organisation 2 has five staff members working with audio-visual materials and have access to staff who have been professionally trained to work with audio-visual materials. However, playback equipment is not regularly serviced. Organisation 2 also rates their opportunities for additional or specialist training as very high.

7.3 Organisation 3

7.3.1 Collection focus

Organisation 3 belongs to the broadcasting sector with no legal responsibilities for collecting and keeping audio-visual materials aside from a retention period to conform with the Broadcasting Act 1989. Organisation 3 identified the general public, publishing/media and commercial users as extremely important target audiences of the organisation. Academic researchers and student were identified as slightly important.

7.3.2 Collection size

Organisation 3 do not expect that the current collection of tape-based audio-visual materials will increase, and all audio-visual materials are currently managed and stored onsite. Collection size in hours is presented in table 3, with most of the collection made up by Betacam SP or SX tape.

Table 3: Organisation 3 collection size in hours

Format	Hours
VHS	0
S-VHS	0
U-matic	<50
Betacam SP or SX	>=5000 <50,000
Betacam Digital	<50
Video8/VideoHi8	<50
DV/Digital8	<50
Other - Please explain	N/A

7.3.3 Digitisation behaviour and focus

Organisation 3 is currently undertaking a digitisation project. However, there is no funding allocation for a preservation programme for audio-visual tapes in place. Organisation 3 estimates that around 17 percent of the collection is currently digitised. They estimate the yearly rate of digitisation at around 260 hours at a rate of 5 hours per week "...using current staff downtime".

All reasons for digitisation were identified as extremely important, access for users; preservation to relieve stress on fragile carriers; and to save the contents of carrier due to lack of playback

equipment. When tape originals begin to deteriorate Organisation 3 digitise effected items. Organisation 3 produce uncompressed and uncorrected archival masters.

All digitisation work is carried out in-house. No preservation work is currently outsourced. Organisation 3 only has separate master and viewing/user copies for items that have been digitised. Digitised material is stored in a digital mass storage system with backup redundancy copy. Analogue originals are retained after digitisation. Digital items held in the collections of Organisation 3 can be accessed by staff via internal workstation/network on site, low-quality copies for viewing and downloading are available for internal use only. Some material is available on the organisation's website, otherwise access to public is only available on request.

Organisation 3 produce uncompressed and uncorrected archival masters. Preferred formats are currently defined by editing workflows, media is archived "same as source". Digitised master copies are DV25 for Standard Definition, AVC Intra for High Definition both with MXF wrapper. Preferred formats for access copies are not formally defined but they currently use an MPEG-4 AVC file format.

7.3.4 Opportunities/challenges affecting digitisation progress

Organisation 3 has no budgeted preservation programme in place for audio-visual tape collections. Complications regarding legal rights issues not generally an issue for Organisation 3.

7.3.4.1 Storage facility and conditions

Organisation 3 identified the general condition of the collection as good. The most significant problem identified as affecting the tape collection was lack of playback equipment. Storage and quality of cataloguing were identified as moderate priority and mechanical damage and vinegar syndrome are identified as low priority. Organisation 3 stores their collection in climate-controlled conditions, however, as the collection is "...a working collection, it is not possible to ensure best practice conditions".

7.3.4.2 Quality of cataloguing

Approximately 80 percent or greater of audio-visual collections held by Organisation 3 have been electronically catalogued with 20 percent or less not described or catalogued. The organisation identified the collection catalogue and metadata standard as not adequate, especially for older items, requiring significant work in updating or complementing the metadata during the digitisation process. Organisation 3 identified Dublin Core (adapted) as the preferred metadata standard. This catalogue cannot be accessed by the public at all.

7.3.4.3 Staffing and professional knowledge

Organisation 3 has 3.75 FTE staff members working with the audio-visual materials. Organisation 3 also has access to staff with extensive professional training to work with audio-visual materials and Regular maintenance of playback equipment is carried out on a maintenance schedule.

7.4 Organisation 4

7.4.1 Collection focus

Organisation 4 belongs to the archive sector with no legal responsibilities for collecting and keeping audio-visual materials. Organisation 4 identified the general public, publishing/media and broadcast depositors as extremely important target audiences. Academic researchers and commercial users were identified as very important and student were identified as moderately important.

7.4.2 Collection size

Organisation 4 expect that the current collection of tape based audio-visual materials will increase, in both "...professional content, and similar in amateur content". They state the reason for growth is because of the "...inability of broadcasters / production houses / individuals to access tape-based collections without playback equipment". Organisation 4 stores part of the audio-visual materials collection off-site. Collection size in hours is presented in table 4 with VHS and DV/Digital8 making up a bulk of the collection.

Table 4: Organisation 4 collection size in hours

Format	Hours
VHS	>=5000 <50,000
S-VHS	>=1000 <5,000
U-matic	>=5000 <50,000
Betacam SP or SX	>=50,000
Betacam Digital	>=5000 <50,000
Video8/VideoHi8	>=500 <1,000
DV/Digital8	>=5000 <50,000
Other - Please explain	N/A

7.4.3 Digitisation behaviour and focus

Organisation 4 is currently undertaking a digitisation project. They estimate that around 3.5 percent of the collection is currently digitised and approximate that at "...current rate of work (assuming no additional resourcing) we are looking at digitally preserving 0.6% of the videotape collection each year".

Preservation to relieve stress on fragile carriers, and to save contents of carrier due to lack of playback equipment, is identified as an extremely important reason for digitisation. Increased access for user copies was identified as very important, and online and onsite digital browsing was identified as moderately important. When tape originals begin to deteriorate Organisation 4 digitally preserve these by creating “an uncompressed file, as well as a compressed access file, and store in our digital archive with multiple, redundant LTO tape backups”. Organisation 4 produce uncompressed and uncorrected archival masters.

Nearly all digitisation work is carried out in-house. However, 1/2-inch video digitisation is outsourced as Organisation 4 “...have no operational playback equipment” for this medium. Organisation 4 has separate master and viewing/user copies. Digitised material is stored in a digital mass storage system with backup LTO tape copy with analogue originals retained after digitisation. Digitised items can be accessed by the public via, internal workstation/network on site; low-quality copies for viewing on website; and copies are also made available on request. Digitised material is also available through third parties that distribute them.

Organisation 4 produce uncompressed and uncorrected archival masters. Preferred formats for digitised master copies are 10 (or 8) bit uncompressed QuickTime files, or JPEG2000 files. Preferred formats for access copies are h.264 files.

7.4.4 Opportunities/challenges affecting digitisation progress

Organisation 4 has an audio-visual preservation programme in place for audio-visual tape collections. Complications regarding legal rights issues are an issue for Organisation 4.

7.4.4.1 Storage facility and conditions

Organisation 4 identified the general description of the collection as acceptable. The most significant problem identified as affecting the tape collection was, lack of playback equipment; lack of technicians to service equipment; and quality and/or lack of catalogue detail. Storage and mechanical damage were identified as moderate priority. Organisation 4 stores their collection in climate-controlled conditions.

7.4.4.2 Quality of cataloguing

Approximately 10 percent or greater of audio-visual collections held by Organisation 4 have been electronically catalogued and 40 percent catalogued using a paper-based system. This leaves 50 to 60 percent of the collections not described or catalogued. Organisation 4 identified FIAF cataloguing

rules along with 'internal broadcast archive standards' as the preferred standard for cataloguing and description. The representative for the organisation stated that, "Descriptive metadata is not addressed during the digitisation process, although preservation and technical metadata are created or updated at this point. Another group of the Archive is responsible for descriptive metadata once the digitisation is complete". Access to is available to the public via an online finding aid on the organisation's website.

7.4.4.3 Staffing and professional knowledge

Organisation 4 has approximately 65 staff members working with the audio-visual materials and has access to staff who have professional training to work with audio-visual materials. Organisation 4 have a schedule for regular maintenance of playback equipment. Organisation 4 are also members of several national or international (audio-visual) organisations.⁵

⁵ FIAF (International Federation of Film Archives), AMIA (Association of Moving Image Archivists), SEAPAVAA (South-East Asia and Pacific AudioVisual Archiving Association), IASA (International Association of Sound and Audiovisual Archives), ARANZ (Archiving and Records Association of NZ), MA (Museums Aotearoa) and NZCCM (NZ Conservators of Cultural Materials).

8. Discussion

The examination of the tape-based audio-visual preservation strategies in New Zealand organisations highlights the list of challenges faced by organisations with audio-visual collections of heritage value. Knowledge around condition, preservation and digitisation progress of this material has been difficult to understand in the New Zealand context. The breakdown of survey results presented in section 7 of this study offer a picture of the New Zealand situation. While all respondents stated that they have an audio-visual digitisation programme in place, the study presents the shared difficulties organisations face in securing continued access of New Zealand's audio-visual heritage items. Challenges faced by all organisations include access to playback equipment, staff, storage, mechanical damage, vinegar syndrome and issues related to the quality of cataloguing.

The guiding question, "How are New Zealand organisations housing audio-visual collections of heritage value approaching the preservation of their tape collections?" was explored and broken down in to three sub questions, responses to these questions as discussed below.

8.1 Reasons identified for digitisation of audio-visual heritage items

The Canadian Conservation Institute and NFSA both believe that unless action is taken quickly, we run the risk of access to tape-based audio-visual material being lost forever, due to lack of funding, aging equipment and loss of expertise required to carry out digitisation (NFSA, 2015; Canadian Conservation Institute, 2012, p.6). Analysis of data collected in this study, see table 5, aligns with these assertions. In the New Zealand context, all four participating organisations identified preservation to rescue content from original and obsolete carriers due to lack of essential equipment, as extremely or very important, three stating this was an extremely important factor.

While, overall findings showed that digitisation for preservation was identified as slightly more important when compared with digitisation for access, most organisations also highly ranked digital access as a driving factor. Two out of four of the organisations stated digitisation for improving access to copies for browsing on site or online was also extremely important, with one reporting this was moderately important, the fourth stated this was not important for the organisation. Three out of four of the organisations identified a need for digitisation to improve access, by providing user copies on request as extremely or very important. One of the organisations also listed digital access to increase speed of access for viewing and reuse as extremely important.

Table 5

Q5.2 - What are the main reasons for digitising materials?											
Question	Extremely important		Very important		Moderately important		Slightly important		Not at all important		Total
Access - To create copies for browsing on site or online	50.00%	2	0.00%	0	25.00%	1	0.00%	0	25.00%	1	4
Access - To provide copies at the request of users	50.00%	2	25.00%	1	0.00%	0	0.00%	0	25.00%	1	4
Preservation - To relieve stress on fragile originals which need to be preserved	75.00%	3	0.00%	0	25.00%	1		0	0.00%	0	4
Preservation - To rescue content from original (obsolete) carriers that cannot be saved or consulted (for lack of equipment)	75.00%	3	25.00%	1	0.00%	0	0.00%	0	0.00%	0	4
Other - please list *	100.00%	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0	1

* to increase speed of access for viewing and reuse of material

8.2 Acknowledgement for the need for preservation and digitisation

There is robust evidence presented in this study to suggest that organisations recognise that policies and measures related to migration of analogue material to digital formats will ensure that issues related to physical degradation, carrier deterioration, chemical instability, and access are mitigated. For example, all four organisations who participated in this study are currently digitising tape-based material and three of four have a preservation programme in place. With one organisation investing in outsourcing some digitisation of 1/2-inch video (due to lack of access to playback equipment). Additionally, all organisations ensure that at risk tape-based material is digitally preserved. It is also important to mention that all organisations surveyed have access to staff who are professionally trained to work with audio-visual collections. It is interesting to note that the reasons for digitisation delays, highlighted in the Klijn and Lusenet (2008) report, are the same reasons given by the participants in this survey as being issues driving the need for digitisation. These include deteriorating material, obsolete equipment, cataloguing backlogs and lack of expertise.

However, in general terms, while organisations seem to understand the importance of preserving this material, there seems to be a reluctance to financially acknowledge the rapidly closing window of opportunity available to preserve this audio-visual material as stressed in multiple recent publications presented in this report (Casey, 2015, Library of Congress, 2012; National Film and Sound Archive of Australia, 2015). There is also a gap in the formal data and data collection related to the audio-visual archival situation in New Zealand. The New Zealand National Digital Forum (NDF) surveys carried out nationally in 2013, 2014 and 2016 provide very limited information related to digitisation of audio-

visual formats. In fact, film and audio specific collections are not treated as a separate organisation type by the NDF survey. Survey results for digitisation of audio-visual collections were also very disappointing and show an overwhelming focus on photographic and manuscript material, with only 3% of organisations planning digitisation of film material and 7% audio material.

8.3 Values and barriers of a collaborative national audio-visual digitisation programme

Substantial international research suggests that cooperation at a national level can be used as a tool for improving an overwhelming digitisation backlog (Library of Congress, 2012; Schuller, 2008; Zorich, Waibel and Erway, 2008). Moreover, the NSFA (2015), state there is an increasing consensus among audio-visual archives, that it will be difficult to complete the immense amounts of digitisation before the required technology and expertise become obsolete, without some form of collaboration.

While a national cooperation initiative could provide measurable benefits, there are a number of barriers and challenges presented in these findings that will need to be addressed before successful collaboration can be considered. For instance, all four organisations identified different preferred formats for master and user copies, as they have differing requirements for the media, for example, formats compatible with editing software for reuse versus preference for a long-term archive format. Not having consistent output formats for digital masters and access copies maybe a barrier for a collaborative programme.

Quality of cataloguing was also generally identified by the organisations as problematic (see table 6) with one stating that "...there is too much to do it all, so we prioritise enhancing parts of the collection and leave other parts with 'skeleton records'". All organisations also identified a different preferred metadata schema and only one organisation identified their metadata description as "mostly okay". Additionally, half of the organisations stated that legal issues related to copyright ownership did complicate access to the collection.

Following her study of ten Icelandic audio-visual archives and collections Laas (2011), called for Icelandic authorities to acknowledge the need for comprehensive policies and practical measures to ensure the preservation of Iceland's audio-visual heritage. This research presented here also highlights this need and presents that lack of financial support and staffing appear to be among the main barriers to digitisation of collections in New Zealand organisations, with three out of four of the organisations having 5 staff or under employed to work with significantly sized audio-visual collections.

Table 6

Q6.4 - During the digitisation process, how much time do you spend on updating or complementing metadata?	Count
We spend a lot of our time on optimising descriptive metadata	1
Only the most serious problems are addressed, to limit the time spent	0
The descriptions are mostly okay, so we do not need to do a lot of work on them	1
The descriptions are not adequate, but we have no resources to improve them	1
Not applicable (no digitisation is done)	0
Other - Please explain *	1
Total	4

* Descriptive metadata is not addressed during the digitisation process, although preservation and technical metadata are created or updated at this point. Another group of the Archive is responsible for descriptive metadata once the digitisation is complete.

9. Conclusions

The intention of this study was to gain insight into the work being undertaken to ensure preservation and continued access to New Zealand's audio-visual heritage items, and to explore the motivations driving digital preservation decision-making. It was anticipated that these insights would assist in understanding if a national collaborative preservation programme, to encompass all heritage film and sound collections stored in New Zealand repositories, could be a workable proposal.

These results lend weight to the idea of exploring the value of a national collaborative preservation programme. Allowing the organisations to share knowledge and make use of collective preservation avenues and resources, to increase the chances of survival of at-risk material. This approach has the potential to assist institutions at all levels, who may be disadvantaged through lack of resources or specialised staff and equipment. However, there are significant barriers and challenges presented in these findings that will need to be addressed before successful collaboration can be considered.

10. Future Research

It is suggested that a future follow-up survey in three to five years as carried out to understand the accuracy and sustainability of current digitisation estimates. Future surveys may also garner improved participation from organisations housing audio-visual heritage items.

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12. Appendices

11.1 Appendix 1: Participation email

Hello...

I am a Masters student in [Information Studies at Victoria University of Wellington](#). As part of this study I am undertaking a research project. The project aims to examine audio-visual preservation problems facing New Zealand organisations housing aging tape-based content of heritage value, please find information sheet attached.

I am inviting participants from five organisations identified as having substantial or significant audio-visual collections. All participants are asked to complete a survey before, where possible or practical, taking part in an in-person interview. It is estimated that the survey will take about three quarters of an hour to complete. The survey can be completed online via this [survey link](#).

The participant is will then be invited to participate in a follow up in-person interview to elaborate answers, as well as to clarify any answers that are unclear to the interviewer.

If you are willing to take part in this research, please read the attached information sheet and complete the survey before Monday, 1 April 2019. Should you feel the need to pull out of the project, you may do so freely at any stage before the results are analysed and submitted.

The University requires that ethics approval be obtained for research involving human participants. Responses collected will form the basis of my research project and will be put into a written report, participants have the option for their answers to be submitted on an anonymous basis. All material collected will be kept confidential, only myself and my supervisor, Dr Brenda Chawner, will see the survey results. The project will be submitted for marking to the School of Information Management and deposited in the University Library.

If you have any questions or would like to receive further information about the project, please contact me via email corletrene1@myvuw.ac.nz, or my supervisor, Dr Brenda Chawner, FLIANZA, Senior Lecturer, School of Information Management, Victoria University of Wellington, P O Box 600, Wellington or brenda.chawner@vuw.ac.nz

Your participation is greatly appreciated.

Kind regards,
Renee

11.2 Appendix 2: Participation information sheet



Losing New Zealand's moving image heritage: exploring the current state of audio-visual tape preservation strategies in New Zealand.

INFORMATION SHEET FOR PARTICIPANTS

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

Who am I?

My name is Renee Corlett and I am a Masters student in Information Studies at Victoria University of Wellington. This research project is work towards completion of my Masters.

What is the aim of the project?

This project aims to:

- Examine audio-visual preservation problems facing New Zealand organisations housing aging tape-based content of heritage value.
- Gain insight into the motivations driving digital preservation decision-making and to develop a picture of the current state of audio-visual tape preservation strategies in New Zealand.
- Use insights gathered to assist in investigating the value of a national collaborative preservation programme/plan to encompass all heritage film and sound collections stored in New Zealand repositories.

This research has been approved by the Victoria University of Wellington Human Ethics Committee Application ID 0000027246.

How can you help?

You have been invited to participate because you are directly involved in caring for audio-visual heritage material. If you agree to take part, I will ask you to complete a questionnaire followed by an interview at a venue suitable to you. I will ask you questions about your organisation's audio-visual tape collection and the preservation strategies your organisation has in place. Both the interview and questionnaire will take approximately three quarters of an hour. I will audio record the interview with your permission and write it up later. You can choose to not answer any question or stop the interview at any time, without giving a reason.

You can withdraw from the study by contacting me at any time before 30 April 2019. If you withdraw, the information you provided will be destroyed or returned to you.

What will happen to the information you give?

This research is confidential. This means that the researcher named below will be aware of your identity, but the research data will be combined, and your identity will not be revealed in any reports, presentations, or public documentation. However, you should be aware that in small projects the identity of you and the organisation you work for might be obvious to others in your community.

Only my supervisors and I will read the notes or transcript of the interview. The interview transcripts, summaries and any recordings will be kept securely and destroyed on 1 July 2021.

What will the project produce?

The information from my research will be used in Masters research report.

If you accept this invitation, what are your rights as a research participant?

You do not have to accept this invitation if you don't want to. If you do decide to participate, you have the right to:

- choose not to answer any question;
- ask for the recorder to be turned off at any time during the interview;
- withdraw from the study before 30 April 2019;
- ask any questions about the study at any time;
- receive a copy of your interview recording;
- receive a copy of your interview transcript.

If you have any questions or problems, who can you contact?

If you have any questions, either now or in the future, please feel free to contact either myself or my supervisor:

Student:

Name: Renee Corlett
University email address:
corletrene1@myvuw.ac.nz

Supervisor:

Name: Dr Brenda Chawner, FLIANZA.
Role: Senior Lecturer
School: School of Information Management
Phone: (04) 463 5780
brenda.chawner@vuw.ac.nz

Human Ethics Committee information

If you have any concerns about the ethical conduct of the research, you may contact the Victoria University HEC Convenor: Dr Judith Loveridge. Email hec@vuw.ac.nz or telephone +64-4-463 6028.

11.3 Appendix 3: Participation consent form



Losing New Zealand's moving image heritage: exploring the current state of audio-visual tape preservation strategies in New Zealand.

PARTICIPANT CONSENT FORM

This consent form will be held for 2 years.

Researcher: Renee Corlett, School of Information Management, Victoria University of Wellington.

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to take part in an audio recorded interview.

I understand that:

- I may withdraw from this study at any point before 1 April 2019, and any information that I have provided will be returned to me or destroyed.
- The identifiable information I have provided will be destroyed on 1 July 2021.
- Any information I provide will be kept confidential to the researcher and the supervisor.
- I understand that the results will be used for a Masters research report.
- My name will not be used in reports, nor will any information that would identify me. Yes No
- I would like a copy of the recording of my interview Yes No
- I would like a copy of the transcript of my interview Yes No
- I would like to receive a copy of the final report and have added my email address below. Yes No

Signature of participant: _____

Name of participant: _____

Date: _____

Contact details: _____

11.4 Appendix 4: Survey questions

Survey questions

These questions will be given to the participant in the form of an online survey. The participant will also be invited to participate in a follow up in-person interview to elaborate on the open-ended answers, as well as to clarify any answers that are unclear to the interviewer. To view a copy of the online survey please visit https://vuw.qualtrics.com/jfe/form/SV_bBCd7v3aumzys1T

Survey of audio-visual tape collections and preservation strategies in New Zealand

1. Participation and Consent

Please indicate if you would like to complete this survey anonymously.

Organisational anonymity	<input type="checkbox"/>
Personal anonymity	<input type="checkbox"/>

I confirm that I have read and understand the information sheet provided for this study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

I understand that my participation is voluntary and that I am free to withdraw at any time before the results have been analysed.

I understand that my responses and data collected during the study, may be looked at by individuals from Victoria University. I give permission for these individuals to have access to my records.

I agree to take part in this study

2. Survey population

Please identify your organisational sector.

Archive	<input type="checkbox"/>
Library	<input type="checkbox"/>
Museum	<input type="checkbox"/>

Private collector	
Research Institute	
Broadcaster	
Other - Please explain	

Is your organisation member of a national or international (audio-visual) archives/library/museum organisation?

Does your organisation have a specific (legal) responsibility for collecting and keeping AV materials? If so, what is the nature of your legal responsibilities?

Do you manage and keep all materials in your audio-visual collections in-house?

How many staff members does your organisation employ to work with the audio-visual collections?

Do you have staff that has been professionally trained for working with audio-visual collections?

What are the possibilities to be trained for working with audio-visual collections in your organisation on a scale of 1 - 10?

Who are the target audiences of your organisation?

	1	2	3	4	5
	Not important				Very important
General public					
Academic researchers					
Students					
Publishing/media					
Other commercial users					
Special user group					

3. Audio-visual tape collection

Do you expect an increase in your collection? If so, what is the reason for tape collection growth?

What is the expected growth estimated in hours?

Please indicate your collection size in amount of hours

	<50	>=50 <500	>=500+ <1000	>=1000 <5000	>=5000 <50,000	>=50,000
VHS						
S-VHS						
U-matic						
Betacam SP or SX						
Betacam Digital						
Video8/VideoHi8						
DV/Digital8						
Other - Please explain						

How would you describe the general condition of the collection?

Very good	
Good	
Acceptable	
Deteriorating	
Not known	

Can you identify any specific problems in film collections?

	High Priority	Moderate Priority	Low Priority	Not known	Not present
Lack of playback equipment					
Mechanical Damage					
Vinegar syndrome					
Storage					

Quality and/or lack of cataloguing					
Other*					

*Please list other specific problems in film collection.

4. Preservation

Do you store your audio-visual collections under climate-controlled conditions?

Do you have a preservation programme for audio-visual tape collections?

Do you have separate master copies as well as user/access copies?

When tape originals begin to deteriorate, what do you do? Do you transfer materials to new carriers or digitise?

Do you outsource any preservation work to commercial vendors and if so, what type of work?

No	
Conservation work	
Transfer to new carriers	
Cleaning and repackaging	
Digitisation	

Is there regular maintenance of playback equipment for audio-visual materials?

Is access to your audio-visual collections complicated by legal rights issues?

5. Digitisation

Are you currently involved in a digitisation programme for you tape collection or are you planning digitisation projects within the next year?

How would you characterise your digitisation activities?

on request	
------------	--

special project	
systematic programme	

What are the main reasons for digitising materials? Please indicate importance by a number from 1 to 5 (1= not very important or not relevant, 5 extremely important)

	1	2	3	4	5
	Not important				Very important
Access - To create copies for browsing on site or online					
Access - To provide copies at the request of users					
Preservation - To relieve stress on fragile originals which need to be preserved					
Preservation - To rescue content from original (obsolete) carriers that cannot be saved or consulted (for lack of equipment)					
Other - Please explain					

What are the preferred formats and resolutions used in your organisation for video master copies?

MPEG2	
Digital Betacam	
AVI	
Other - Please explain	

What are the preferred formats and resolutions used in your organisation for access copies?

Video access copies

MPEG2	
DVD	
Other - Please explain	

Which part of the digitisation process is done in house?

	Inhouse	External
Selection and preparation		
Processing of files to make access copies		
Storage		
Providing copies on request		
Conversion from analogue to digital		
Cataloguing and metadata		
Providing access through web interface		
Migration and digital preservation		

Do you produce uncompressed and uncorrected archival masters?

How do you store digital materials?

Hard disks	
Digital mass storage system	
Cloud-based storage system	
Other - Please explain	

How does your organisation backup your digital materials?

Hard disks	
Digital mass storage system	
Cloud-based storage system	
Other - Please explain	

How can the digital collections be accessed?

Internal workstation/network on site	
Low-quality copies for viewing on website	
Complete files can be downloaded from website	
Copies are made on request (free of charge or with admin fee)	
As part of products that we sell (Digital download or DVDs)	

Through third parties that distribute them	
--	--

Do you keep all the analogue originals after digitisation?

6. Access

What percentage of the audio-visual collections has been described or catalogued?

Paper-based catalogue	
Electronic system	
Not described or catalogued	

Can your catalogue be consulted by the public?

No	
Onsite access	
Internet access	
Other - Please explain	

Which (international) standard or guidelines are used for cataloguing/description/metadata?

ISBD (NBM)	
MARC 21	
Dublin Core	
FIAF cataloguing rules	
IASA cataloguing rules	
ISAD(G)	
METS	
Other - Please explain	

During the digitisation process, how much time do you spend on updating or complementing metadata?

We spend a lot of our time on optimising descriptive metadata	
---	--

Only the most serious problems are addressed, to limit the time spent	
The descriptions are mostly okay, so we do not need to do a lot of work on them	
The descriptions are not adequate, but we have no resources to improve them	
Not applicable (no digitisation is done)	
Other - Please explain	

11.5 Appendix 5: Aggregated Results of the Survey

Survey Results

1. Participation

Q1.1 - Please indicate if you would like to complete this survey anonymously.

Answer	%	Count
Organisational anonymity	40.00%	2
Personal anonymity	60.00%	3
Total	100%	5

Q1.2 - I confirm that I have read and understand the information sheet provided for this study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

Answer	%	Count
I have received and understood the information sheet	100.00%	4
Total	100%	4

Q1.3 - I understand that my participation is voluntary and that I am free to withdraw at any time before the results have been analysed and submitted.

Answer	%	Count
I understand that my participation is voluntary	100.00%	4
Total	100%	4

Q1.4 - I understand that my responses and data collected during the study may be looked at by individuals from Victoria University. I give permission for these individuals to have access to these results.

Answer	%	Count
I understand and give permission	100.00%	4
Total	100%	4

Q1.5 - I agree to take part in this study.

Answer	%	Count
I agree	100.00%	4
Total	100%	4

Q2.1 - Please identify the sector your organisation belongs to.

Answer	%	Count
Archive	50.00%	2
Library	25.00%	1
Museum	0.00%	0
Private collector	0.00%	0
Research Institute	0.00%	0
Broadcaster	25.00%	1
Other - Please explain	0.00%	0
Total	100%	4

Q2.2 - Is your organisation a member of a national or international (audio-visual) archives/library/museum organisation?

Answer	%	Count
Yes, please list **	25.00%	1
No	75.00%	3
Total	100%	4

** FIAF (International Federation of Film Archives), AMIA (Association of Moving Image Archivists), SEAPAVAA (South-East Asia and Pacific Audio-Visual Archiving Association), IASA (International Association of Sound and Audiovisual Archives), ARANZ (Archiving and Records Association of NZ), MA (Museums Aotearoa), NZCCM (NZ Conservators of Cultural Materials).

Q2.3 - Does your organisation have a specific (legal) responsibility for collecting and keeping AV materials? If so, what is the nature of your legal responsibilities?

No
 Outside of relevant materials that form part of the official University Records, I do not think we have legal obligations to collect AV material.
 Yes the Public Records Act
 Yes, only in relation to Broadcasting Act.

Q2.4 - Do you manage and keep all materials in your audio-visual collections in-house?

Answer	%	Count
Yes	50.00%	2
No	0.00%	0
Part of the collection is stored offsite	50.00%	2
Other - please explain	0.00%	0
Total	100%	4

Q2.5 - How many staff members does your organisation employ to work with the audio-visual collections?

approx. 65
5
1 sometimes 2, but not as FTE
3.75 FTE

Q2.6 - Do you have staff who have been professionally trained to work with audio-visual collections?

Answer	%	Count
Yes ***	100.00%	4
No ****	0.00%	0
Total	100%	4

*** Recently, but 2 years without

****As training is not available in New Zealand.

What are the possibilities to be trained for working with audio-visual collections in your organisation on a scale of 1 - 10?

2
8
0 *
8

* No professional training available

Q2.8 - Who is the target audience of your organisation?

Question	Extremely important		Very important		Moderately important		Slightly important		Not at all important	Total
General public	75.00%	3	0.00%	0	25.00%	1	0.00%	0	0.00%	4
Academic researchers	50.00%	2	25.00%	1	0.00%	0	25.00%	1	0.00%	4
Students	50.00%	2	0.00%	0	25.00%	1	25.00%	1	0.00%	4
Publishing/media	75.00%	3	0.00%	0	0.00%	0	25.00%	1	0.00%	4
Other commercial users	50.00%	2	25.00%	1	0.00%	0	0.00%	0	25.00%	4
Special user group	66.67%	2	0.00%	0	0.00%	0	0.00%	0	33.33%	3

Q.3 Audio-visual tape collection**Q3.1 - Do you expect an increase in your tape collection? If so, what is your expected growth estimated in hours?**

Yes - hard to estimate in hours. Potentially thousands of hours of professional content, and similar in amateur content.

Not from active collecting but there is possibility of collection growth via content deposit. Not something we can really estimate.

It is unknown if Gov Agencies holds tape collections to be transferred to Archives, but that expectation is very low.

No, as we no longer use betacam tape as a our primary storage media.

Q3.2 - What is the reason for tape collection growth?

Inability of broadcasters / production houses / individuals to access tape-based collections without playback equipment.

From either internal University sources who have content of value they can no longer deal with or from external content holders.

If the TVNZ Archives comes from NGa Taonga's care to Archives NZ

No growth.

Q3.3 - Please indicate your collection size in amount of hours.

Question	0	<50	>=50	>=500+	>=1000	>=5000	>=50,000	Total
VHS	25.00%	1 0.00%	0 0.00%	0 0.00%	0 25.00%	1 25.00%	1 25.00%	4
S-VHS	50.00%	1 0.00%	0 0.00%	0 0.00%	0 50.00%	1 0.00%	0 0.00%	2
U-matic	0.00%	0 25.00%	1 0.00%	0 25.00%	1 25.00%	1 25.00%	1 0.00%	4
Betacam SP or SX	0.00%	0 0.00%	0 50.00%	2 0.00%	0 0.00%	0 25.00%	1 25.00%	4
Betacam Digital	0.00%	0 50.00%	2 25.00%	1 0.00%	0 0.00%	0 25.00%	1 0.00%	4
Video8/VideoHi8	0.00%	0 75.00%	3 0.00%	0 25.00%	1 0.00%	0 0.00%	0 0.00%	4
DV/Digital8	0.00%	0 33.33%	1 0.00%	0 33.33%	1 0.00%	0 33.33%	1 0.00%	3
Other *	0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 100.00%	1 0.00%	1

Q3.4 - How would you describe the general condition of the collection?

Answer	%	Count
Very good	25.00%	1
Good	25.00%	1
Acceptable	25.00%	1
Deteriorating	25.00%	1
Not known	0.00%	0
Total	100%	4

Q3.5 - Can you identify any specific problems in tape collections?

Question	High Priority	Moderate Priority	Low Priority	Not known	Not present	Total
Lack of playback equipment	50.00%	2 25.00%	1 25.00%	1 0.00%	0 0.00%	4
Mechanical Damage	0.00%	0 50.00%	2 50.00%	2 0.00%	0 0.00%	4
Vinegar syndrome	0.00%	0 25.00%	1 50.00%	2 25.00%	1 0.00%	4
Storage	25.00%	1 75.00%	3 0.00%	0 0.00%	0 0.00%	4
Quality and/or lack of cataloguing	25.00%	1 50.00%	2 25.00%	1 0.00%	0 0.00%	4
Other*	100.00%	1 0.00%	0 0.00%	0 0.00%	0 0.00%	1

Q.4 Preservation**Q4.1 - Do you store your audio-visual collections under climate-controlled conditions?**

Answer	%	Count
Yes *	75.00%	3
No **	25.00%	1
Total	100%	4

*Office controlled air-conditioning

** Not best practice

Q4.2 - Do you have a preservation programme for audio-visual tape collections?

Answer	%	Count
Yes	75.00%	3
No	25.00%	1
Total	100%	4

Q4.3 - Do you have separate master copies as well as user/access copies?

Answer	%	Count
Yes *	100.00%	4
No	0.00%	0
Total	100%	4

*Only for digitised or digital only items.

*Some digitisation

Q4.4 - When tape originals begin to deteriorate, what do you do? For example, do you transfer materials to new carriers or digitise?

We digitally preserve - create an uncompressed file, as well as a compressed access file, and store in our digital archive with multiple, redundant LTO tape backups.

Stabilise source as best as possible (e.g. by cleaning/baking etc as best suits specific problems) then digitise

Digitise - except cinematic-sound are transferred to polyester

Digitise

Q4.5 - Do you outsource any preservation work to commercial vendors and if so, what type of work?

Answer	%	Count
No	50.00%	2
Conservation work	0.00%	0
Transfer to new carriers	0.00%	0
Cleaning and repackaging	0.00%	0
Digitisation	25.00%	1
Other **	25.00%	1
Total	100%	4

** 1/2-inch video is outsourced (digitisation) as we have no operational playback equipment

Q4.6 - Is there regular maintenance of playback equipment for audio-visual materials in your organisation?

Answer	%	Count
Yes	50.00%	2
No *	50.00%	2
Total	100%	4

*Once off in 4 years

Q4.7 - Is access to your audio-visual collections complicated by legal rights issues?

Answer	%	Count
Yes	50.00%	2
No	50.00%	2
Total	100%	4

Q.5 Digitisation

Q5.1 - Are you currently involved in a digitisation programme for you tape collection or are you planning digitisation projects within the next year?

Answer	%	Count
Currently undertaking digitisation project	100.00%	4
No digitisation projects underway	0.00%	0
All digitisation projects complete	0.00%	0
Plans to commence project within the next year	0.00%	0
Total	100%	4

Q5.2 - What are the main reasons for digitising materials?

Question	Extremely important	Very important	Moderately important	Slightly important	Not at all important	Total					
Access - To create copies for browsing on site or online	50.00%	2	0.00%	0	25.00%	1	0.00%	0	25.00%	1	4
Access - To provide copies at the request of users	50.00%	2	25.00%	1	0.00%	0	0.00%	0	25.00%	1	4
Preservation - To relieve stress on fragile originals which need to be preserved	75.00%	3	0.00%	0	25.00%	1	25.00%	0	0.00%	0	4
Preservation - To rescue content from original (obsolete) carriers that cannot be saved or consulted (for lack of equipment)	75.00%	3	25.00%	1	0.00%	0	0.00%	0	0.00%	0	4
Other - please list *	100.00%	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0	1

* to increase speed of access for viewing and reuse of material

Q5.3 - What are the preferred formats used in your organisation for video master copies?

Answer	%	Count
MPEG2	25.00%	1
Digital Betacam	0.00%	0
AVI	0.00%	0
Other - Please explain *	75.00%	3
Total	100%	4

10 (or 8) bit uncompressed quicktime files or JPEG2000 files

DV25 for SD, AVCintra for HD, both in MXF wrapper

I need to check

Q5.4 - What are the preferred formats used in your organisation for access copies?

Answer	%	Count
MPEG2	0.00%	0
DVD	0.00%	0
Other - Please explain *	100.00%	4
Total	100%	4

H264 files

I need to check

WMV

Q5.5 - Which part of the digitisation process is done in-house?

Question	In-house	External provider	Total		
Selection and preparation	100.00%	3	0.00%	0	3
Processing of files to make access copies	100.00%	3	0.00%	0	3
Storage	100.00%	3	0.00%	0	3
Providing copies on request	100.00%	3	0.00%	0	3
Conversion from analogue to digital	100.00%	3	0.00%	0	3
Cataloguing and metadata	100.00%	3	0.00%	0	3
Providing access through web interface	100.00%	3	0.00%	0	3
Migration and digital preservation	100.00%	3	0.00%	0	3
Other - please list	100.00%	1	0.00%	0	1

Q5.6 - Do you produce uncompressed and uncorrected archival masters?

Answer	%	Count
Yes	75.00%	3
No	25.00%	1
Total	100%	4

Q5.7 - How do you store digital materials?

Answer	%	Count
Hard disks	0.00%	0
Digital mass storage system	100.00%	4
Cloud-based storage system	0.00%	0
Other - Please explain *	25.00%	1
Total	100%	4

* with tape backup

Q5.8 - How does your organisation backup your digital materials?

Answer	%	Count
Hard disks	0.00%	0
Digital mass storage system	100.00%	4
Cloud-based storage system	0.00%	0
Other - Please explain *	25.00%	1
Total	100%	4

* multiple LTO tape copies

Q5.9 - How can the digital collections be accessed?

Answer	%	Count
Internal workstation/network on site	75.00%	3
Low-quality copies for viewing on website	100.00%	4
Complete files can be downloaded from website	0.00%	0
Copies are made on request (free of charge or with admin fee)	75.00%	3
As part of products that we sell (Digital download or DVDs)	0.00%	0
Through third parties that distribute them	50.00%	2

Q5.10 - Do you keep all the analogue originals after digitisation?

Answer	%	Count
Yes	100.00%	4
No, please explain how they are 'disposed' of	0.00%	0
Total	100%	4

Q.6 Access**Q6.1 - What percentage of the audio-visual collections has been described or catalogued?**

Answer	Org 1	Org 2	Org 3	Org 4
Paper-based catalogue		40.00%		
Electronic system	95.00%	10.00%	90.00%	80.00%
Not described or catalogued	5.00%		10.00%	20.00%

Q6.2 - Can your catalogue be consulted by the public?

Answer		
No	25.00%	1
Onsite access	0.00%	0
Internet access	75.00%	3
Other - Please explain	0.00%	0
Total	100%	4

Q6.3 - Which (international) standard or guidelines are used for cataloguing/description/metadata?

Answer		Count
ISBD (NBM)		0
MACH21		1
Dublin Core		2
FIAF cataloguing rules		1
IASA cataloguing rules		0
ISAD(G)		0
METS		0
Other - Please explain *		3

*

Internal broadcast archive standards

I need to check

Adapted Dublin Core

Q6.4 - During the digitisation process, how much time do you spend on updating or complementing metadata?

Answer	%	Count
We spend a lot of our time on optimising descriptive metadata	25.00%	1
Only the most serious problems are addressed, to limit the time spent	0.00%	0
The descriptions are mostly okay, so we do not need to do a lot of work on them	25.00%	1
The descriptions are not adequate, but we have no resources to improve them	25.00%	1
Not applicable (no digitisation is done)	0.00%	0
Other - Please explain *	25.00%	1
Total	100%	4

* Descriptive metadata is not addressed during the digitisation process, although preservation and technical metadata are created or updated at this point. Another group of the Archive is responsible for descriptive metadata once the digitisation is complete.

Renee Corlett

Word count – 9520 approx. (excluding Abstract, Appendices and References).