

# MOVING IMAGE COLLECTIONS IN IRELAND SURVEY REPORT



MOVING MEDIA  
November 2017

# CONTENTS

EXECUTIVE SUMMARY AND RECOMMENDATIONS	PAGE 3
TERMS OF REFERENCE	PAGE 8
RESEARCH METHODOLOGY	PAGE 9
TIMELINE AND DELIVERABLES	PAGE 10
PART 1: WHO COLLECTS MOVING IMAGES AND WHY?	PAGE 12
PART 2: WHAT TYPE OF MOVING IMAGE COLLECTIONS EXIST?	PAGE 16
PART 3: RIGHTS AND RESOURCES	PAGE 23
PART 4: GOING DIGITAL – DIGITAL PRESERVATION AND ACCESS PROJECTS IN IRELAND	PAGE 29
SUMMARY	PAGE 32

## ADDITIONAL INFORMATION:

APPENDIX I – SUMMARY OF SURVEY FINDINGS	PAGE 33
APPENDIX II – EU COMMISSION RECOMMENDATIONS	PAGE 34
LIST OF CONTRIBUTING ORGANISATIONS	PAGE 37
FILM HERITAGE ADVISORY GROUP	PAGE 38
GLOSSARY	PAGE 40

# EXECUTIVE SUMMARY

During the Spring and Summer of 2016, the first ever survey of moving image collections in Ireland was undertaken. 54 organisations that hold moving image collections of film reels, video tape or digital video files were surveyed and interviewed to gather information regarding their collections, what they contain, and how they are managed. During the survey a database of moving image collections was created in addition to an online 'Register of Moving Image Collections in Ireland' that is now maintained by the Irish Film Institute (IFI).

The survey cast a wide net to collect knowledge and map the holdings and efforts of a broad range of custodians including Museums, Libraries, local authorities, Galleries, Performing Arts Groups and many others for whom audio-visual archiving is not always a core practice. More than 200 organisations across Ireland were identified and contacted to take part in this survey.

As a result of this initiative a rich and diverse range of culturally valuable audio-visual assets has been mapped; films and video tapes containing original performances and productions that are a unique and irreplaceable record of Irish society, culture, academic and artistic heritage during the 20<sup>th</sup> and early 21<sup>st</sup> centuries.

The survey identified material covering the period 1910 to the present day - over 100 years of moving images. Over 26,000 moving image assets (film reels, video tapes and digital video files) have been identified across these 53 collections. The most prolific type of moving image medium was video tape which accounted for 70% of the total with 18,300 items found across 44 locations. Film reels totalling over 1,250 items were found across 22 locations, most of the reels are several decades old, with some a century old. Very few had been viewed in many years due to a lack of suitable equipment. A surprisingly large number of digital files were found, totalling 6,732 items across 29 locations, which demonstrates an exponential growth in the amount of material produced and the number of organisations collecting moving image recordings in recent years. The impact of social media and the rise of digital video as an ever more accessible medium for creators is evident.

- In total 26,282 audio-visual items were detected, the majority of these are described as unique and of cultural heritage value.
- 77% of collections continue to grow however at least 62% of respondents are not equipped to view their legacy video and film items, none could digitally scan film.
- Over 88% of respondents do not have any catalogue that describes their collection nor are their collections stored in conditions conducive to the longevity of the video tapes or film reels.
- Digital files made up 26% of the total items detected and were found in 29 locations, a wide range of digital audio-visual file formats and standards exists.
- 5% of custodians have formal training in specialist care of audio visual media most are self-taught.

Inside the distributed collections we surveyed lies our national memory in sound and picture, the films and video tapes they are held on are fragile and obsolete. Video tape was not designed to last forever, older video formats will soon reach a point where there will be little or no functioning equipment or engineering expertise available to ensure their accessibility. Film assets, some close to a century old, are stored without the benefit of the environmental controls that may prolong their physical lifespan and in most cases by organisations with no means to play them. Given that much of the film dates to the middle of the last century, storage is a concern. The provision of stable storage conditions suitable for physical preservation will benefit many collections and may delay the need for digitisation of film for preservation purposes.

Documentation and information describing the collections is sparse, with less than half of the respondents having any form of catalogue or database that records information about the items held. In some cases, catalogue information is at the collection level, rather than the asset level, giving a broad overview of the material without providing detail of the individual items the collection may contain.

Within the context of EU recommendations on both Film Heritage and the digitisation and online accessibility of cultural material a focus on the areas listed above will enable Ireland to participate effectively in national and EU projects, delivering efficiency, harmonisation and ensuring future visibility of Irish cultural heritage. At a national level the recommendations of this report may dovetail with other national initiatives such as Creative Ireland.

A centralised approach is necessary to provide collections custodians with the funding, tools and services that will enable Ireland to meet some of its objectives under the European Commission Recommendation of 24 August 2006<sup>1</sup> on the digitisation and online accessibility of cultural material and digital preservation. A well-coordinated and centralised approach will minimise the capital and resource burden upon custodians in addition to driving harmonisation and efficiency regarding standards and investment. This is particularly relevant to smaller, less established collections, or those not affiliated to larger national collections where there is evidence of best practice and adoption of internationally recognised standards.

Moving image is a hugely important part of our cultural identity and heritage and video is at the core of modern media consumption and consumer behaviour. The digitisation of valuable moving image cultural assets opens a wealth of opportunity for future reuse in a wide variety of contexts, entertainment, educational and entrepreneurial which is the core objective of the EU Recommendations.

The EU Commission values the online accessibility and digital preservation of cultural material as being a source of significant competitive advantage for Europe and seeks to harmonize activities across Member States to support pan European Union action in the field of culture. Beyond the fundamental cultural value of moving image materials, these cultural assets when enabled within digital access

programmes can also have a significant positive impact on other areas of an economy including tourism, education and media.

The EU Commission created the recommendations to support a coordinated approach to Film Heritage amongst Member States and delivered strong signals regarding the need to avoid duplication of effort, introduce scale into supporting services to deliver economies of scale and drive standards to ensure interoperability of outputs within and between Member States. The results of this survey demonstrate that there are avenues available for Ireland to align national activities within this broader European context, by investing in training, committing to standards and creating centres of excellence for the digitisation and digital preservation of culturally valuable moving image collections.

As Ireland transitions to a digital age an opportunity exists to equip the custodians of these important collections with the preservation tools, knowledge and skills to save the sights and sounds of the past 100 years of Ireland for future generations. This report will serve to establish and enhance a culture of archiving in the wider AV communities. Upskilling and support will impact the future, preserving the past by setting foundations and establishing practices for safeguarding material from today and into the future, equipping people with practices and knowledge that they can then apply to their work on an ongoing basis and broadening the archiving skills and knowledge within the State.

## **Recommendations**

1. Develop a coordinated approach to preservation, both digital and analogue, at a national level and in line with wider European programmes.
2. Raise awareness of preservation and access issues with a focus on media obsolescence and imminent threat to magnetic tape based media.
3. Agree standards for the digital preservation of moving image materials and disseminate this information among stakeholders.
4. Agree standards for metadata describing audio-visual works to facilitate effective distribution and interoperability within national and EU digital cultural programmes.
5. Deliver funding through grant schemes or other mechanism to assist organisations in engaging in digital preservation and access programmes.

6. Develop service centres to support organisations that do not have internal technical capabilities (eg. playback, digitisation, storage) thereby delivering economies of scale and technical harmonization.
7. Foster discussion & cooperation among stakeholders to prevent duplication of effort and promote greater collaboration within organisations and bodies across the State to prevent isolation and to encourage awareness.

<sup>1</sup> <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32006H0585> (COMMISSION RECOMMENDATION of 24 August 2006 on the digitisation and online accessibility of cultural material and digital preservation 2006/585/EC)





*Fresh film festival is for filmmakers aged 7 - 18. The collection of films represents a unique representation of young people's experience in Ireland and internationally spanning 20 years. The subjects and themes in the films trace trends in concerns and issues affecting young people.*

*The films document the development of media literacy amongst young people. Many of the filmmakers have continued in their film career and the collection includes their earliest work.*

- Fresh Film Festival

# TERMS OF REFERENCE

The Film Heritage Advisory Group set out to commission a survey of moving image collections in Ireland to help inform decisions around the ongoing preservation of this important part of Ireland's heritage. The aim of the project was to gather information relating to the extent, condition and content of moving image collections within the State in order to assess levels of acquisition, cataloguing, preservation practice, and digitisation and access policies across collections. The project was also intended to deliver a database of collections in existence across the State and to gather and centralise essential information on content and condition of collections. The database will be iterative as information will be added to it over time.

This information will enable the Film Heritage Advisory Group to:

1. Assess the existing situation
2. Analyse and forecast future needs
3. Inform the creation of national policy and strategy for the preservation and accessibility of our moving image heritage

On foot of a competitive tender, the Film Heritage Advisory Group appointed Mr. Simon Factor of Moving Media Ltd. to execute the survey, design and compile the database and deliver this report.

The following are the Terms of Reference for the survey

- Conduct research using existing databases. Projects and resources together with original information gathering from collection holders.
- Develop a database of moving image collections in Ireland from existing lists and available data and through field research and communication with collection holders and professional bodies to encourage and assist them in providing information for this database.
- Work closely with the Chair of the Advisory group to define the required data for collection and approach.
- Communicate with collection holders across Ireland via a range of means including email, telephone calls, and in some cases through personal visits to gather data and to solicit their input into the online database.
- Manage the input of data gathered into the database.
- Attend regular Advisory Group meetings reporting on progress and initial findings.
- Write a report analysing the findings of the survey at the end of the project and making recommendations for future action.



# RESEARCH METHODOLOGY

A dual approach was utilized during this research project where both quantitative and qualitative research was undertaken following an initial design phase where databases and questionnaires were configured. As a primary deliverable for the project was a current database of collections it was necessary to compile a range of existing contact databases and to connect this to a web based questionnaire.

The member organisations of the Film Heritage Advisory Group provided initial lists of targets. These lists were added to additional target organisations identified by the report author. In total over 200 organisations were identified and listed in the database.

A questionnaire was scripted by Moving Media Ltd with input and approval from the Film Heritage Advisory Group. A personalised email describing the project and requesting participation was created linking the questionnaire as an online survey and emailed to the 200 target organisations providing the option for them to:

1. identify themselves as not having any relevant collections,
2. fill in the survey,
3. request someone contact them by phone to undertake the survey.

In order to encourage engagement, potential respondents were contacted up to 4 times requesting participation with the survey. Where respondents had difficulty with the survey they were contacted by phone where an oral interview was conducted and the survey was filled.

## Quantitative

• Targets in Database:	200
• Responses:	102
• Completed Surveys:	54
• Respondents without holdings:	48
• Response Rate	51%

## Qualitative

- Interviews with 10 collections

In order to gain a deeper understanding of key issues relating to the survey Moving Media Ltd carried out qualitative interviews with 10 organisations. These included representatives from The National Museum, Universities, Government Departments and Performing Arts Groups.

Included in the report are a number of examples of quotes or statements made by the survey and interview participants to give a better insight into the range of responses received.

# TIMELINE AND DELIVERABLES

## Timeline:

- Survey launched on March 14<sup>th</sup> 2016
- Register Launched June 1<sup>st</sup> 2016
- Survey Closed August 1<sup>st</sup> 2016
- Data review and merged for report
- V1 Draft Report Delivery Sept
- Final Draft Oct 2016
- Report finalised Aug 2017

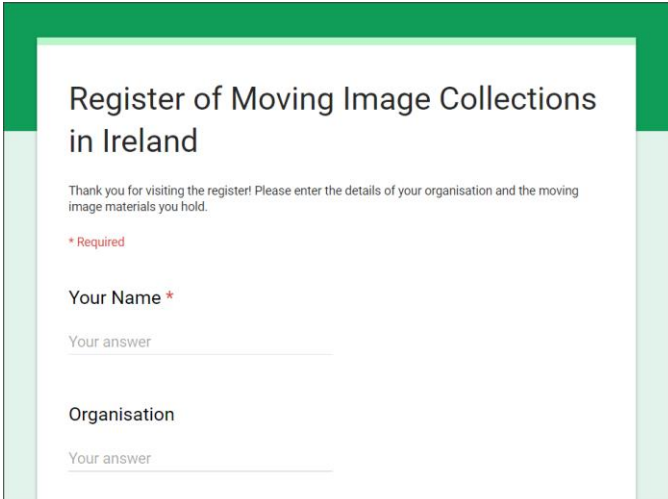
## Delivered Assets:

1. Survey Report (PDF)
2. Supporting Data:
  - Individual Survey Responses (PDF 670 pages)
  - Survey Response Data (XL Spreadsheet)
  - Survey Response Data (CSV Data File)

3. Live Resources:
  - Collection Register [LIVE LINK HERE](https://docs.google.com/a/vidiroanalytics.com/forms/d/1yGJP6_MNs8nsuiBgmahIqQo2eRLeGasb3B_BzsmayU/prefill)

URL:

[https://docs.google.com/a/vidiroanalytics.com/forms/d/1yGJP6\\_MNs8nsuiBgmahIqQo2eRLeGasb3B\\_BzsmayU/prefill](https://docs.google.com/a/vidiroanalytics.com/forms/d/1yGJP6_MNs8nsuiBgmahIqQo2eRLeGasb3B_BzsmayU/prefill)

A screenshot of a Google Forms registration page titled "Register of Moving Image Collections in Ireland". The page has a green header bar. Below the title, there is a thank you message: "Thank you for visiting the register! Please enter the details of your organisation and the moving image materials you hold." A red asterisk indicates a required field. The form contains two sections: "Your Name \*" with a text input field labeled "Your answer", and "Organisation" with a text input field labeled "Your answer".

Register of Moving Image Collections in Ireland

Thank you for visiting the register! Please enter the details of your organisation and the moving image materials you hold.

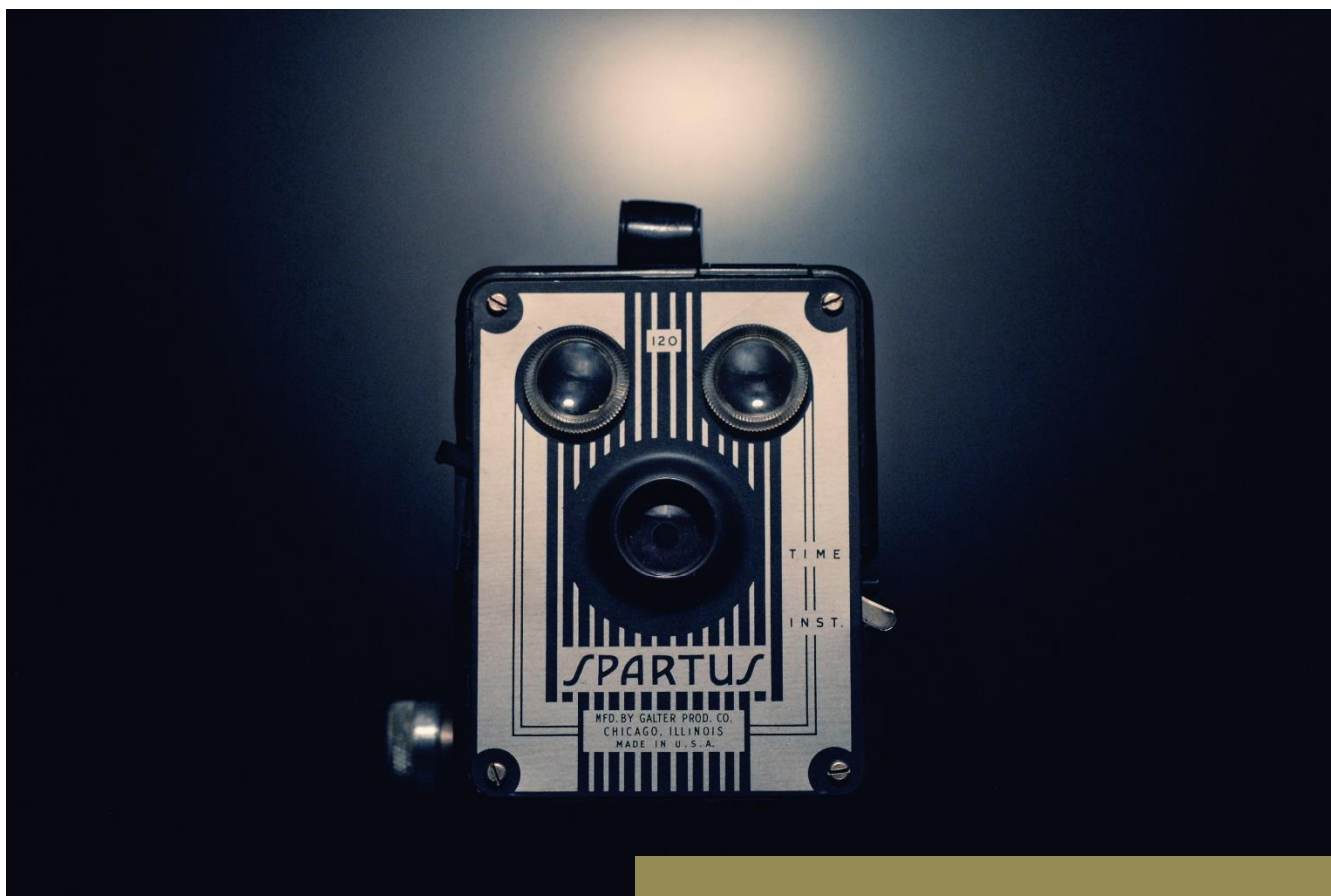
\* Required

Your Name \*

Your answer

Organisation

Your answer



*We have filmed traditional music and song performances at our monthly event in the Cobblestone pub in Dublin. These recitals have been held for the past ten years. Each one includes at least three performers, who each perform, on average, 8 items. There are now over 2,500 individual performances and this collection is growing.*

- Na Píobairí Uilleann

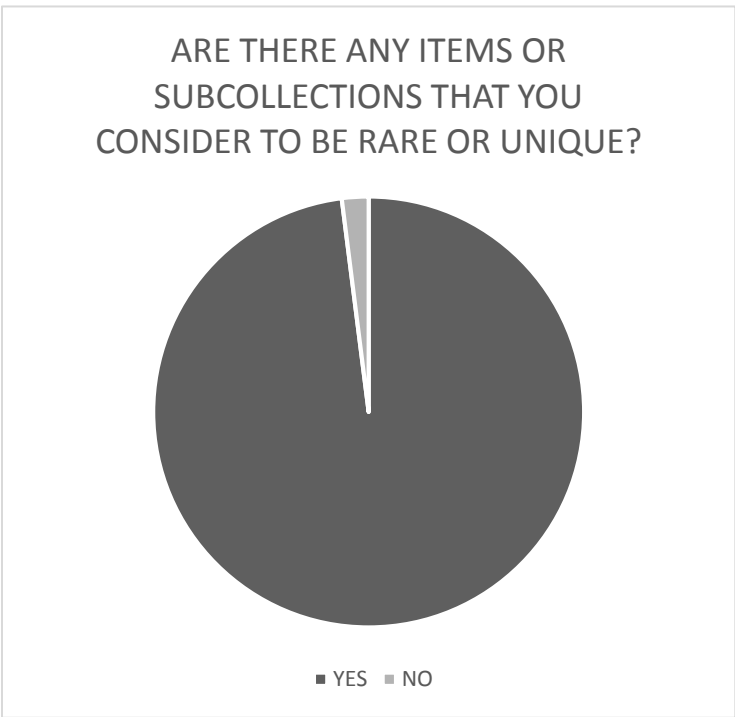
# PART 1: WHO COLLECTS MOVING IMAGES AND WHY?

While much work has been done across Europe in recent years to understand the size and scope of large audio-visual collections held in national repositories, there remains little information regarding smaller collections that exist outside of these. We began our research by compiling a list of 200 organisations across the State that we considered to be suitable targets for our research; these included art galleries, museums, regional arts offices, universities, theatres and performing arts groups. We also included government departments and political parties. In addition to contacting these organisations directly, we promoted our call via press release and social media and set up an online register to allow collections to get in touch.

Of the 200 organisations identified, more than half responded, some to confirm that they did not hold any moving image recordings, 54 organisations completed our survey. We found that approximately 26,000 moving image recordings are held across a wide range of organisation types within the State, with respondents reporting that the vast majority of these are unique. It is the authors’ belief that amongst the organisations who did not respond, there is a high probability that they hold moving image materials and with further resources in the future more exhaustive research could be undertaken.

Close to half of the organisations surveyed have been creating and collecting moving image recordings since before the 1990s; 10% of them are the custodians of film recordings that are close to, and in some cases, over a century old.

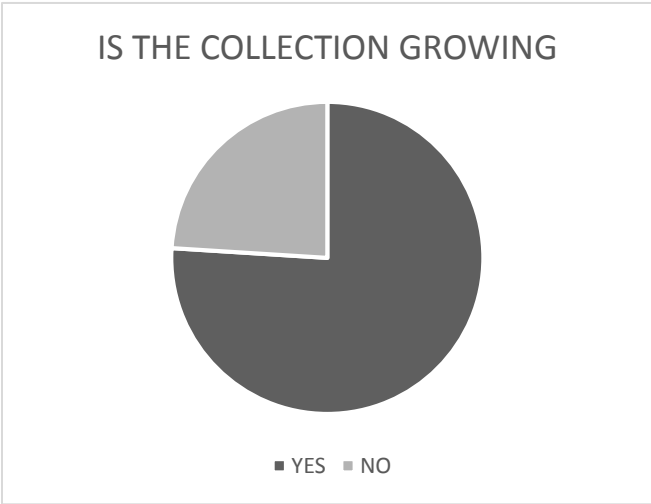
98% of the respondents state that their collections are of national cultural importance and in some cases international importance, as unique reference collections visually documenting a wide range of artistic, academic, professional and entertainment endeavours.



The third level institutions, performing arts groups and libraries, museums and arts offices associated with the various county councils made up the majority of 62% of the total moving image collections

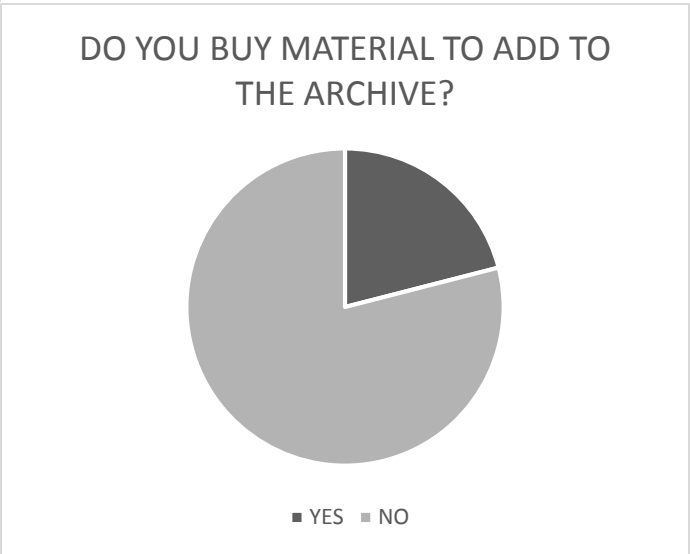
surveyed, with museums and galleries accounting for 15%. Performing arts groups made up the largest single group of survey participants at 27% of the total. Other respondents included a small number of notable independent collectors and libraries. Moving image collections were found in counties Dublin, Wexford, Waterford, Kilkenny, Louth, Monaghan, Offaly, Tipperary, Cork, Limerick, Galway, Sligo, Donegal and Leitrim.

As expected there is a concentration of material in the capital, with Dublin City and County accounting for 55% of collections due to many of our national galleries, museums and collections being located here. More than 13% of collections are located in Limerick, where a number of important and well established academic, performing arts and gallery collections can be found.



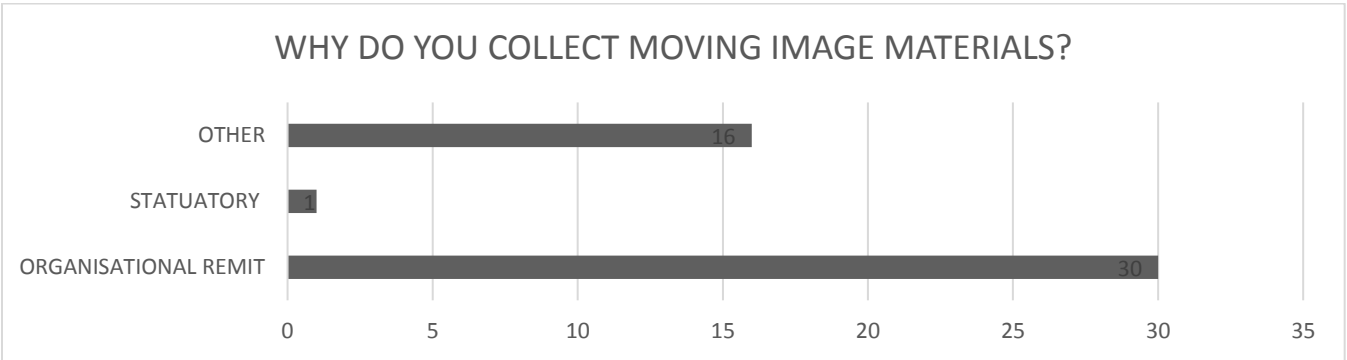
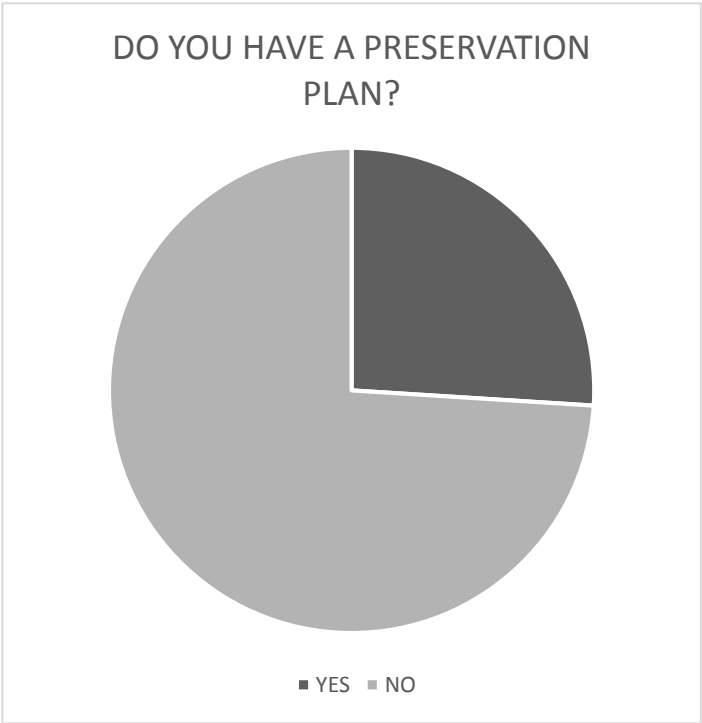
Of these collections, a majority of over 76% are currently growing in size, with just 12 of the collections surveyed stating that their collections of moving image materials would not grow in the future. Most of this growth is coming from the creation of original recordings rather than from commercially produced DVDs or Films being purchased for the collection. Just 21% of collections contain 'bought' media.

Commerically purchased materials tend to be used as reference recordings for educational or performance research within universities and performance arts groups and the media type tends to be a consumer format such as VHS or DVD, rather than a professional broadcast video format such as Digital Betacam or film. Therefore the type of format held is often a reliable indication as to whether the material is original or commercially sourced.



Despite the growth in the original collections only one in four respondents had a collection development policy or a preservation plan. It seems that while moving image collections in Ireland are growing there are sparse resources to support them, and little consideration is given to longer term planning, management and preservation of the content.

The reason for collecting stated by most respondents is an organisational remit, with just one organisation stating a statutory obligation. In many cases collections serve as a record of performance or are documentary project footage for performing arts groups or Regional Arts offices.



Overall, we found that there are a wide range of organisations who hold significant moving image collections in Ireland, each collection is highly specialised and may document the development of a particular subject or art form over several decades. The organisations who collect these materials are doing so to document their area of practice and have done so for some time, in an ad-hoc manner. As archiving audio-visual materials is not their core business there is rarely a preservation policy or plan in place and in most cases these collections continue to grow.



*'Crawford Art Gallery is a National Cultural Institution and regional art museum for Munster, dedicated to the visual arts, both historic and contemporary. The permanent collection comprises over 2500 works, ranging from eighteenth century Irish and European painting and sculpture, through to contemporary video installations. Many of our film pieces are on DVD a medium which may in future years become redundant. It is important to start thinking about digitising our multimedia works and capturing the films through alternative media.'*

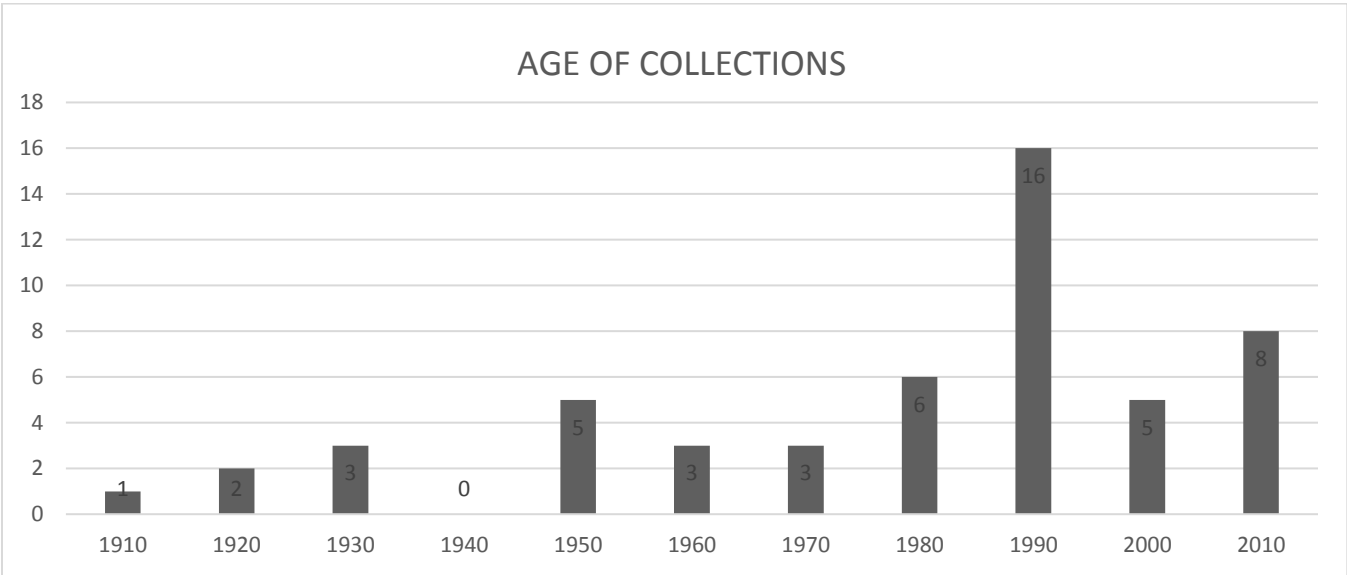
- Crawford Art Gallery



# PART 2: WHAT TYPE OF MOVING IMAGE COLLECTIONS EXIST?

Within the collections of the 54 organisations who hold moving image materials we found a total of 26,282 items. These collections were made up of a mixture of film, video and digital video file formats. Most of the film and video items held within collections are physically as old as the content they contain, very few examples were found where items were more modern copies of older recordings.

Close to half of the collections surveyed contain recordings over 30 years old. There is a spike in the amount of collections that began during the 1990s, which corresponds with the advent of domestic video becoming a cheap and accessible format for many organisations to use as a medium to record their performances and activities.

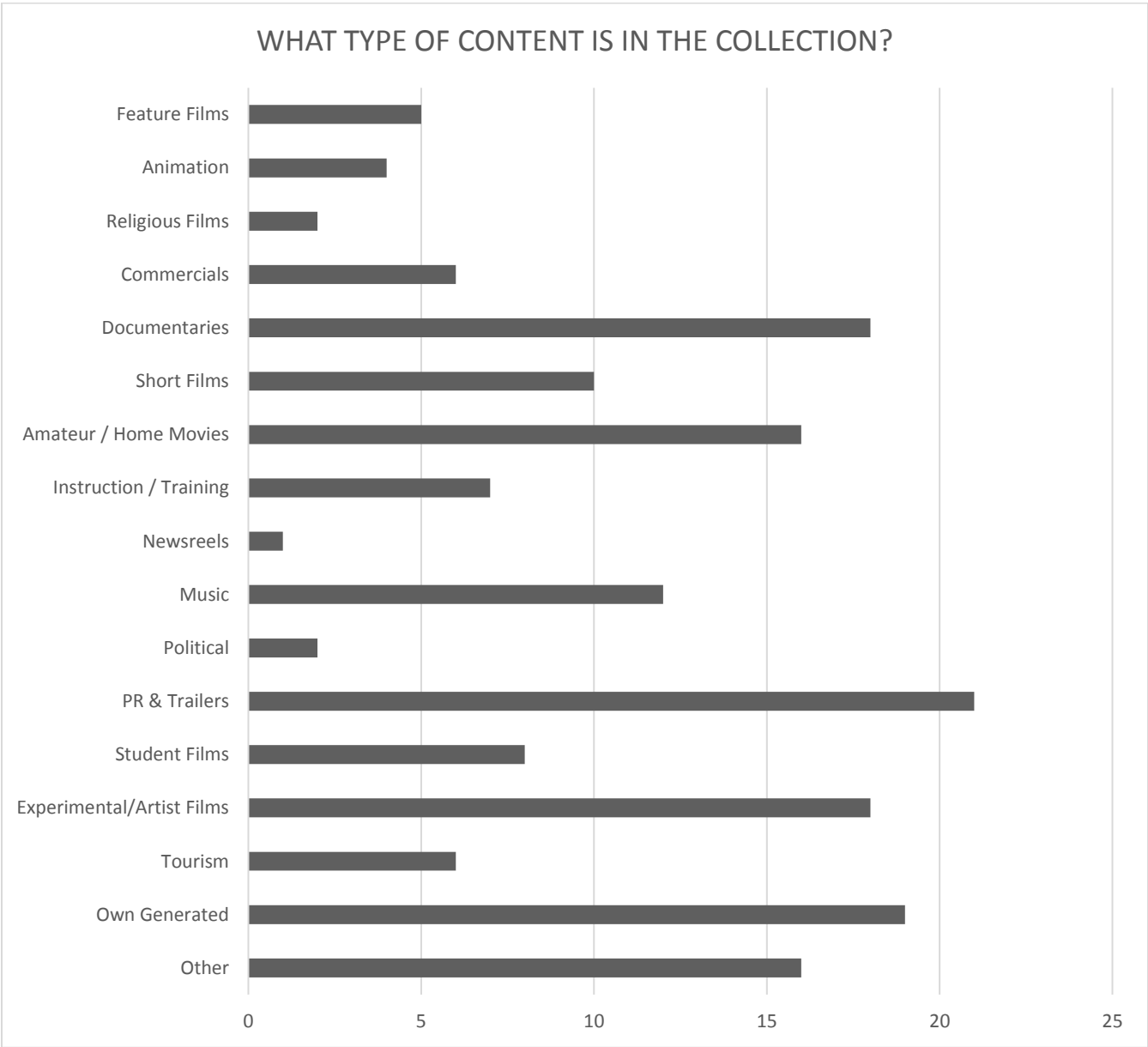


25% of the items held are digital and have been created in the current decade. This is noteworthy and demonstrates that the volume of digital material being generated and stored by these organisations is growing exponentially due to the relative ease of accepting and creating digital files compared to past requirements for managing, storing and working with a wide range physical film and video tape formats and recording equipment.

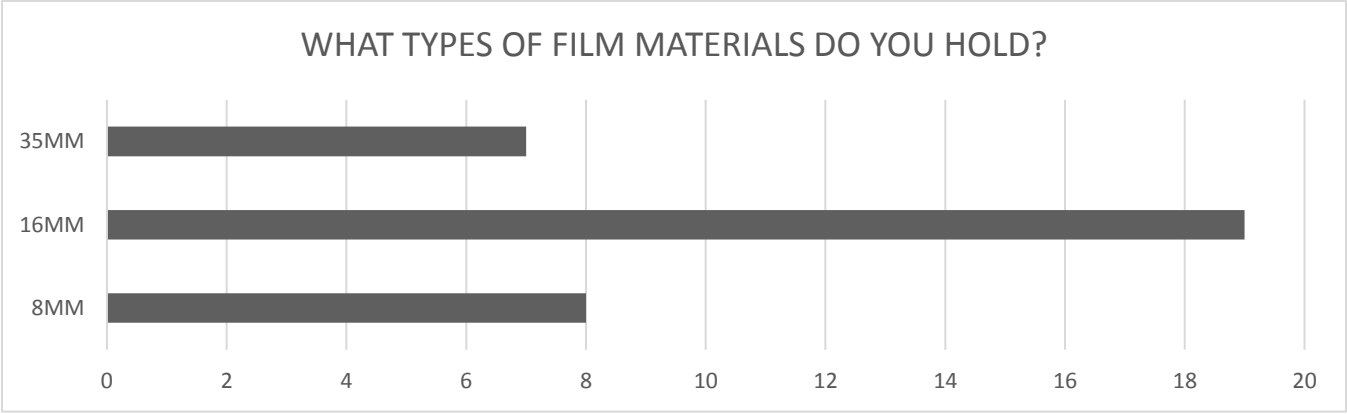
Of the 54 collections that we surveyed 8 were created after 2010 and these are predominantly ‘born digital’, that is to say that they do not contain any physical media such as tape or film instead their collections consist of digital media files stored on a computer system of some sort. These are either held

locally within their computer network, in a cloud storage system such as Amazon or on a video hosting platform such as YouTube.

A wide range of different types of content was found within the collections; among the most common were promotional or PR materials found in 42% of collections and recordings of performances, typically music, dance, theatre performances found in close to 40% of collections.

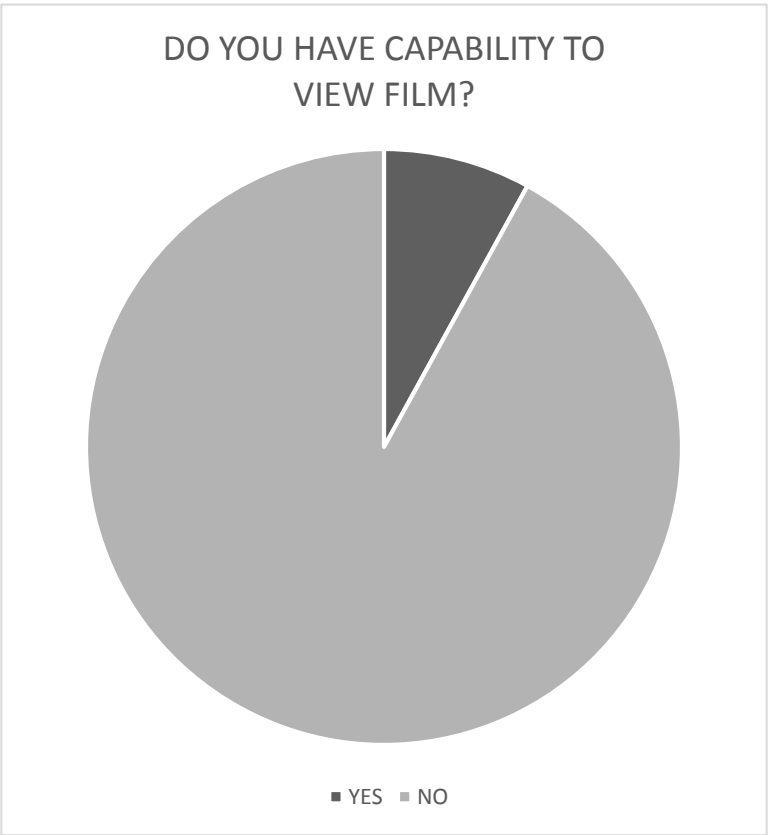


**Film:**



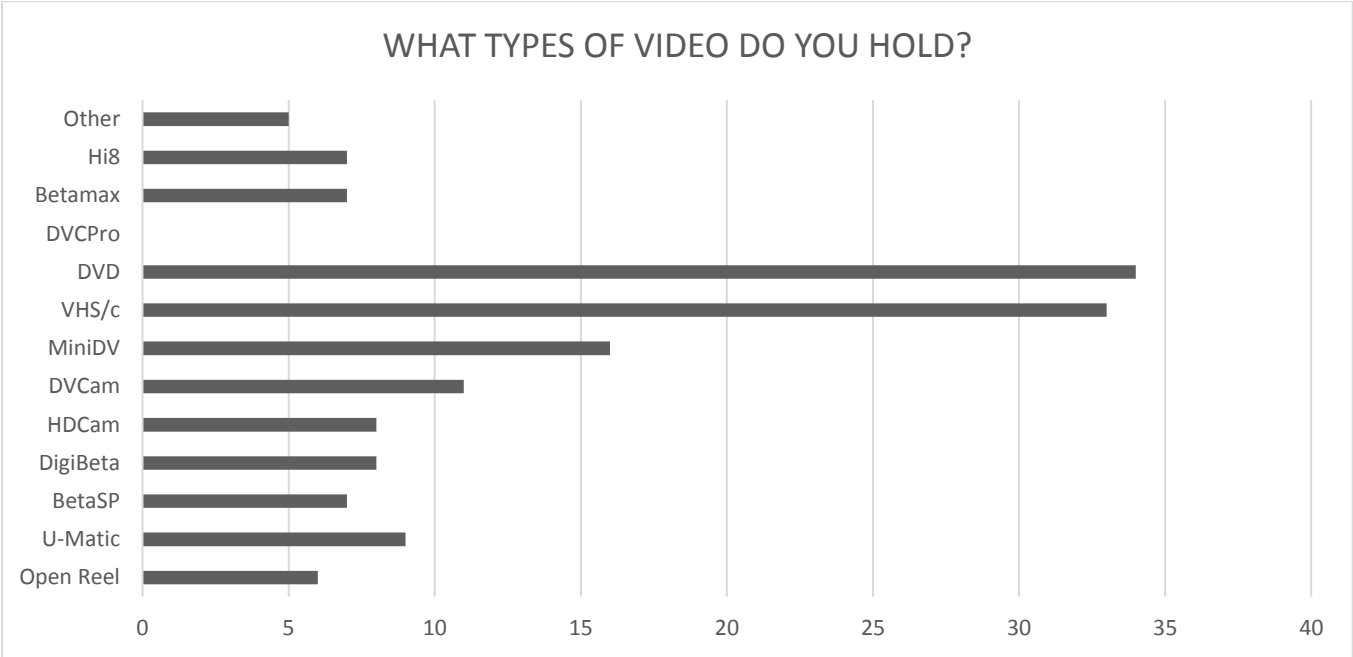
Across 21 organisations we found over 1,250 film items, many of these are unique. Most of the films are small gauge 8mm and 16mm, with 35mm film being found in 7 locations. While film is arguably a more robust medium than video tape, it is susceptible to various forms of degeneration when stored in humid conditions and where temperature is not constant. Over years this will result in shrinkage and warping of the film spool which causes problems during playback and will increase the labour, care and cost of equipment required to digitise the film.

In the case of film material, passive preservation through utilizing correct storage environments can significantly increase the lifespan of the medium, in some cases delaying the requirement for digital preservation. None of the custodians of the collections we surveyed had access to these correct climate controlled storage environments. The provision of appropriate centralised storage for film materials as a service to smaller collections would deliver great benefits and ensure stabilisation of fragile materials. The clear majority of organisations with collections containing film items do not have the capacity to play them, with just 4 having film projection capabilities and another 4 relying upon external Post Production facilities in order to view their content. It seems that due to this lack of equipment most of the organisations have not viewed their film materials in some time.

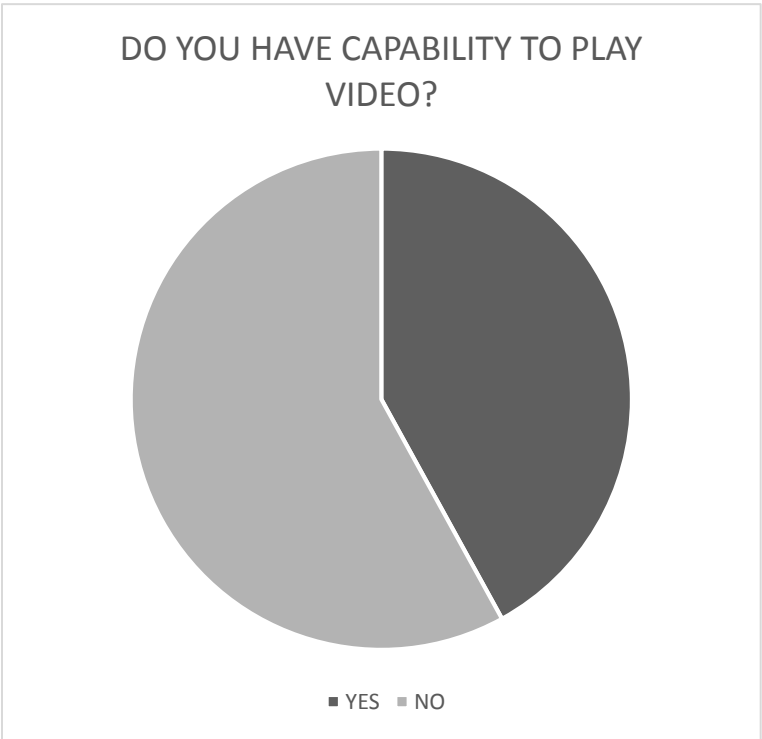


**Video Tape:**

Video tape accounts for most material held in collections, accounting for 70% of all of the moving image materials identified during the survey with VHS and DVD being the most common formats found. Close to 18,300 video tapes and DVDs spread across 44 organisations were found.

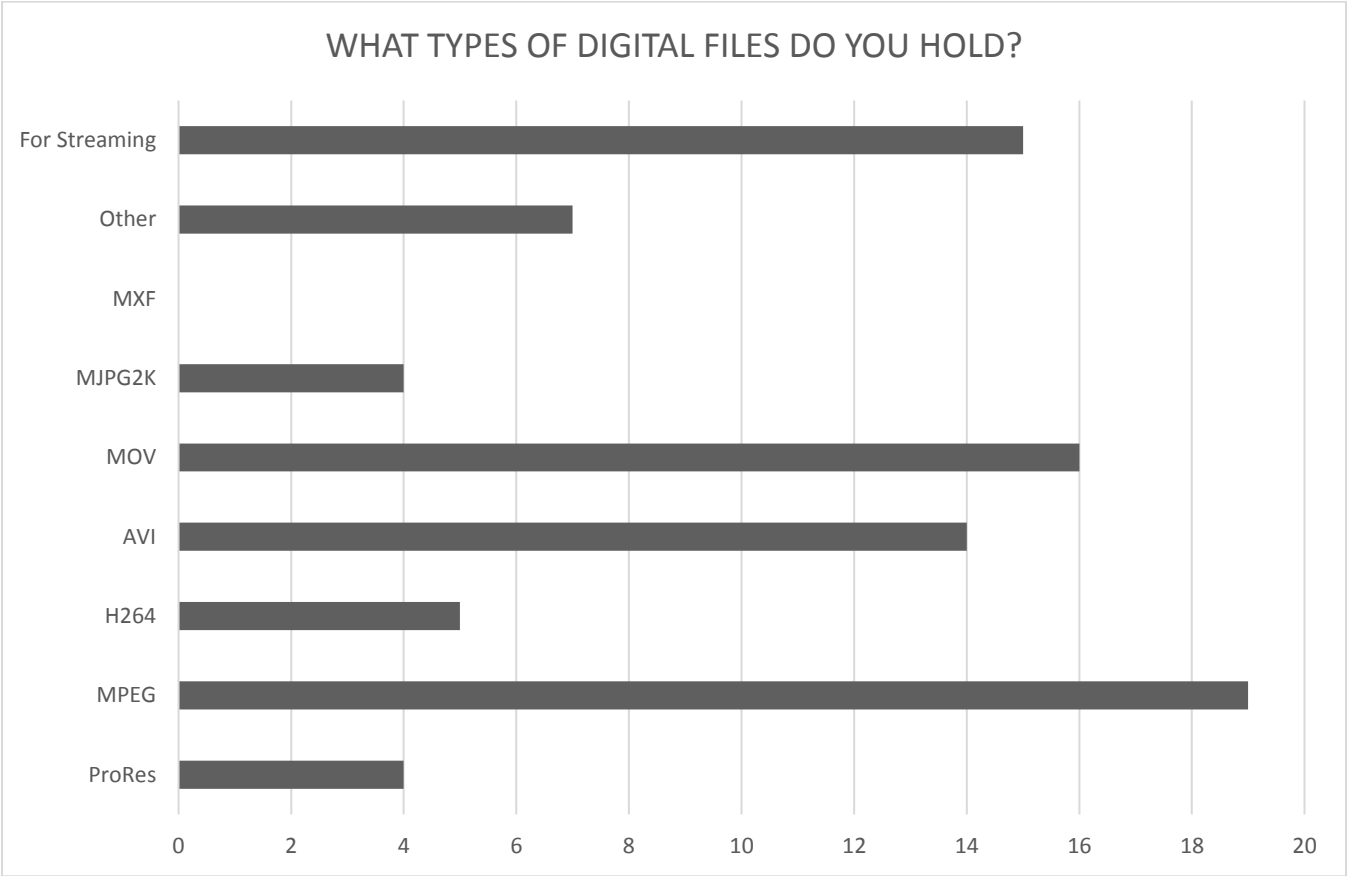


Less than half of the organisations had the ability to play back the video tapes that they held. In most cases organisations who did have capability to do so were limited to VHS or DVD.



Approximately 20% of collections containing video tape hold very old open reel video tape formats and U-Matic video tape. These formats were the first formats used by broadcasters and date back to the 1970s before the introduction of the Sony Professional BetaCam format in the 1980s. These legacy video tape recordings are in a high-risk category and the window of opportunity to preserve their content before the physical carrier disintegrates is closing due to the lack of available playback machinery or engineering skills to work with these formats.

Very few respondents had the capability to playback older consumer formats such as Hi8 or MiniDV, this was also true for turn of the century professional broadcast quality formats such as BetaCamSP, Digital BetaCam or more recent HDCam. Only 6 of the 44 organisations with video tape in their collections had used external companies to digitise or create access copies of the video items.



**Digital:**

Digital video files were found in more than half of the collections we surveyed, with respondents in 29 locations reporting that their digital collections were growing. The range of formats being used is diverse, and many of the video files found are of a type suitable for web delivery or are production video files. These files are typically of a low resolution and would not conform to internationally recognised preservation standards. They have mostly been created for access and distribution purposes and typically are compressed or modified in some way to aid distribution.

In general, there was a lack of awareness about differences between file formats suitable for preservation and those more suitable for access applications. Developing guidelines and providing education to custodians on digital file types, their application and industry standards would greatly assist in supporting them during this transitional period from physical to digitised and born digital assets. This would also avoid the dangers that arise through digitisation of legacy film or video to low resolution digital distribution formats that are then incorrectly relied upon as preservation copies. Digital file

standards for audio-visual media is a complex area and it is important that custodians are aware of the differences between digital access and digital preservation formats so that they do not make choices that may result in them retaining a digital copy of inferior quality to the original physical recording in terms of its visual resolution and audio fidelity.

Interestingly a small number of custodians also described their digital collections as being 'on YouTube' meaning that they did not hold any original version of the video recording, rather they had only a YouTube URL as a reference to access the video and rely solely upon YouTube for the storage of the 'original'.

As set out in the recommendation made by the European Commission, applying standards to digital assets within the context of access and preservation programmes is extremely important as it drives re-use and supports interoperability with other cultural programmes, both locally and within a wider European context. In Ireland today we have a situation emerging at a time of technological change where we are not delivering strong guidelines to stakeholders on suitable formats useful in digital preservation or access projects and the differences between the two.

We have seen that the use of digital video is pervasive across the organisations surveyed and amount of digital video files being collected and stored by organisations across the State is growing. Supporting harmonisation of digital standards as early as possible will ensure more effective reuse and interoperability in the coming years and enable Ireland to meet some of the objectives set out by the Commission.

#### SUMMARY:

- Of the 26,282 moving image assets found 5% were film reels, 70% were Video Tapes, 25% were Digital Files
- Film was found in 22 locations, just 4 had the capability to view the film, 16 & 8mm was found in the majority of collections with 35mm found in 7 locations.
- Video was found in 44 locations, with 40% having playback capability for consumer formats (DVD or VHS) but very little evidence of capability to playback professional video formats.
- 20% of video collections contain high risk formats such as U-Matic or Open Reel which are physically degrading and becoming ever harder to playback due to a global shortage of functioning playback equipment.
- Digital Files were found in abundance across 29 collections, digital collections are growing faster than physical media collections however a lack of standards relating to file formats or digital preservation and storage strategies may store up problems for the future.



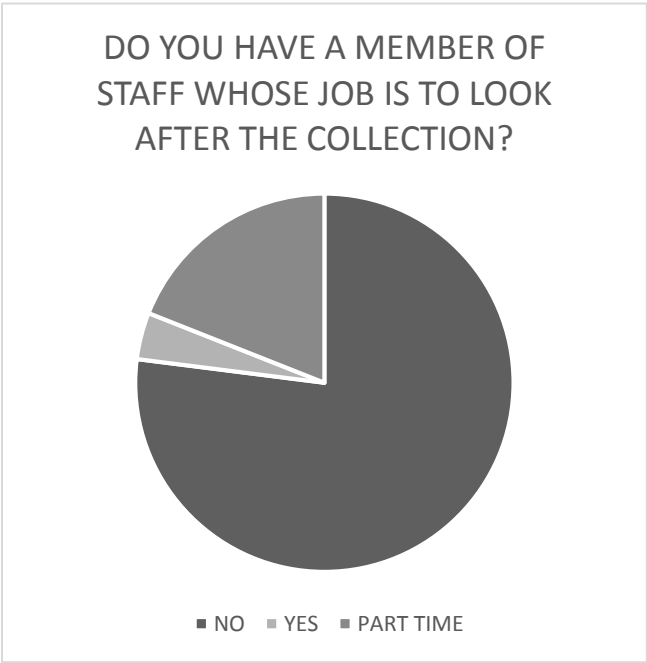
Page | 22



# PART 3: RIGHTS AND RESOURCES

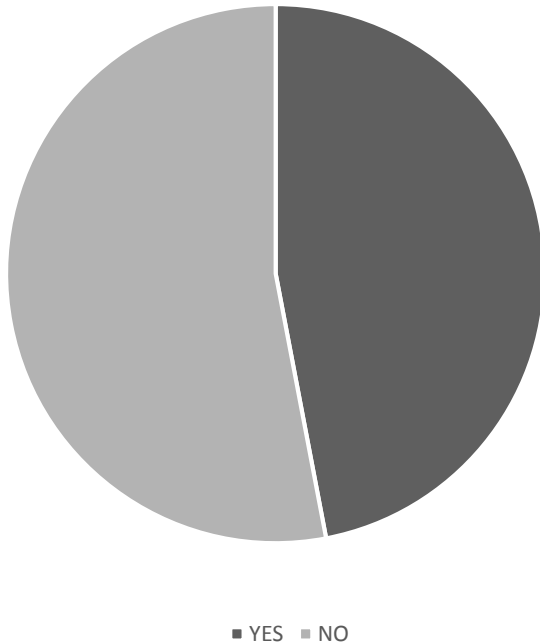
For most of the collections surveyed dedicated resources to care for the moving image collection were extremely limited, most custodians are self-trained and the management of their collection is tangential to their core role. Very few of the respondents have any documentation or information management system that describes their collection. The use of databases and metadata standards relating to the description of their collection was typically only found in larger institutions for whom these aspects of collection management apply to wider collections of which the moving image collection may be a subset.

Of all of the collections surveyed only 2 of the organisations have a designated staff member who works full time managing the moving image collection and who is professionally trained in this specialist area. One in four organisations do have someone in who looks after the collection in a part time capacity and in all cases these individuals are self-taught. 75% of organisations do not have any individual who is officially tasked with looking after their moving image holdings.



Given the complexities of preserving and documenting moving image collections it is commendable that so many organisations in Ireland have managed to maintain their collections on an ad-hoc basis. Clearly there is an opportunity to support these individuals through the dissemination of guidelines, training and financial support to assist them in digitally preserving their collections in an appropriate way, ensuring that common standards are applied to drive interoperability with other EU states and cultural programmes as set out by the EU Commission in its recommendations.

### IS THE COLLECTION DOCUMENTED?



The level of information held by the organisations surveyed that describes or lists the items in their collections is sparse. Less than half of collections have documented their holdings by way of a list and less than a third operate a database system.

The future value of any audio-visual asset is directly linked to the quality of the information that describes it. Where collections do not create metadata that describes the items in the collection the future reuse possibilities for that collection are greatly diminished. The structure and composition of metadata records used to describe individual moving image assets are covered by a range of standards that drive exchange and transfer of rich media assets within digital access programmes.

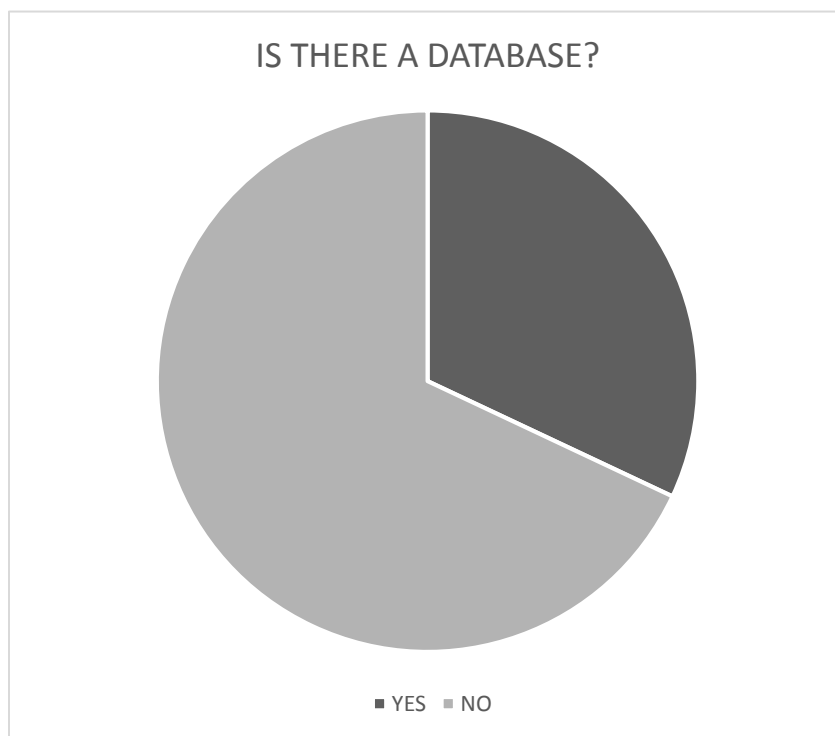
In Ireland in recent years we have made good headway on the topic of information management relating to audio-visual collections. Evidence of this can be seen in the work of the Irish Film Archive through their adoption of the FIAF (International Federation of Film Archives) guidelines for the Cataloguing of Cinematographic Works<sup>(1)</sup>, which is based on Cinematographic Works Standard EN 15907 recommended by the EU and in a broader context with the Digital Repository of Ireland (DRI) recently publishing its own guidelines for metadata<sup>(2)</sup>. Both the IFI and DRI have provided training programmes in recent years which include this subject, as an example the IFI have provided training in collections management as part of the Heritage Council's Museum Standards programme for Ireland and the DRI have an on-going programme of training workshops. The custodians of small collections would benefit from centralised training in descriptive and preservation standards which would open future possibilities for the efficient distribution of their collections within national cultural initiatives and support Irish organisations in effectively participating in and deriving benefits from wider European programmes.

1. [http://filmstandards.org/fsc/index.php/Main\\_Page](http://filmstandards.org/fsc/index.php/Main_Page)

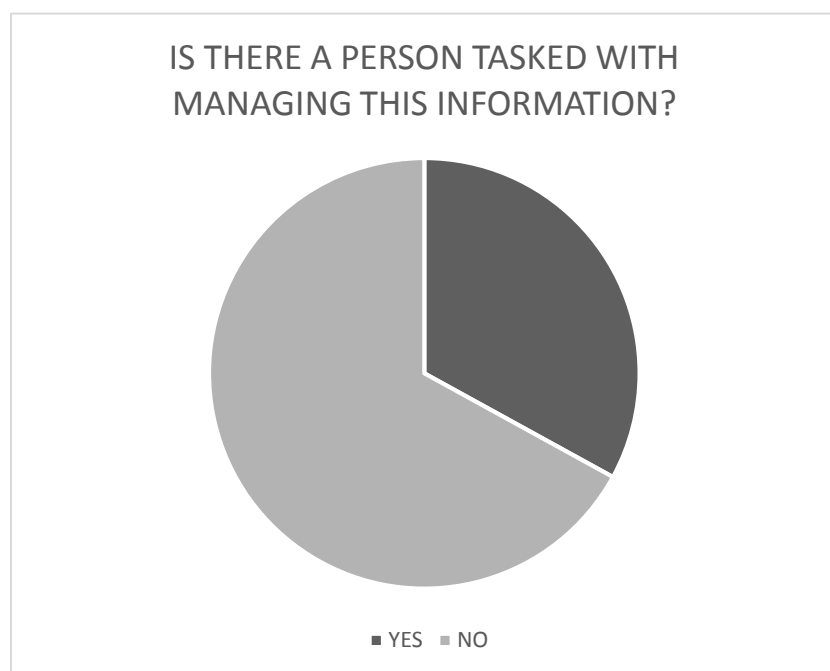
2. <https://doi.org/10.7486/DRI.r4958092r>

Where respondents did operate a system of documentation the choice of database was varied with no two organisations using the same system other than those who responded to say that they used a Microsoft XL Spreadsheet as a database.

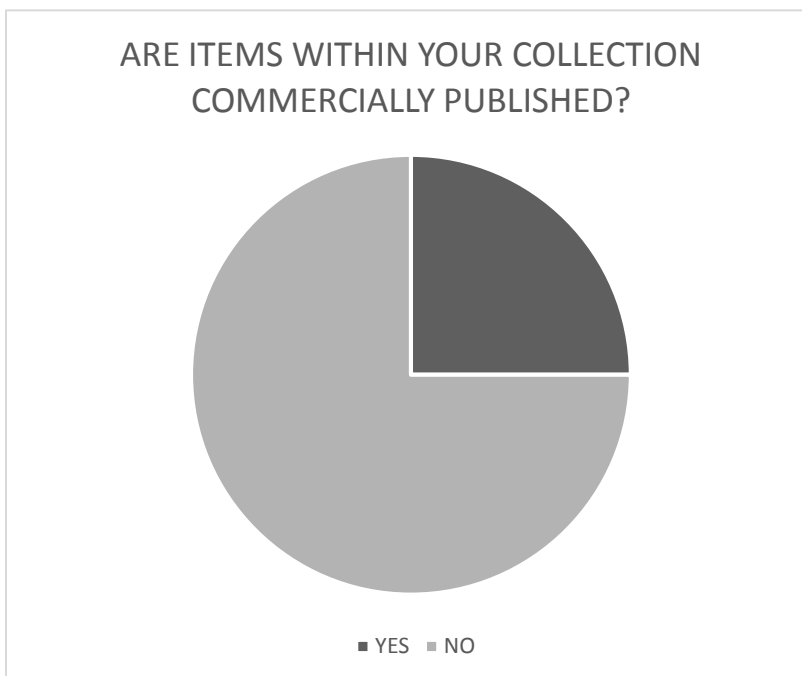
Other organisations, typically larger collections whose audio-visual materials are part of a wider collection are using systems such as Soutron, AdLib, DBText Works, MuseumPlus and other museum and library information management systems. However, even in some cases where advanced collections management practices and information management tools were in place the moving image collections themselves were not documented at the asset level but rather at the collection or sub collection level, sometimes having not been broken out from the delivery batch they were originally received in.



The application of a cataloguing standard was in evidence at a small number of organisations with the most common used being the ISAD (G) standard. In more than two thirds of respondents there was no individual within the organisations with the designated responsibility of looking after any information resource supporting the moving image collections.

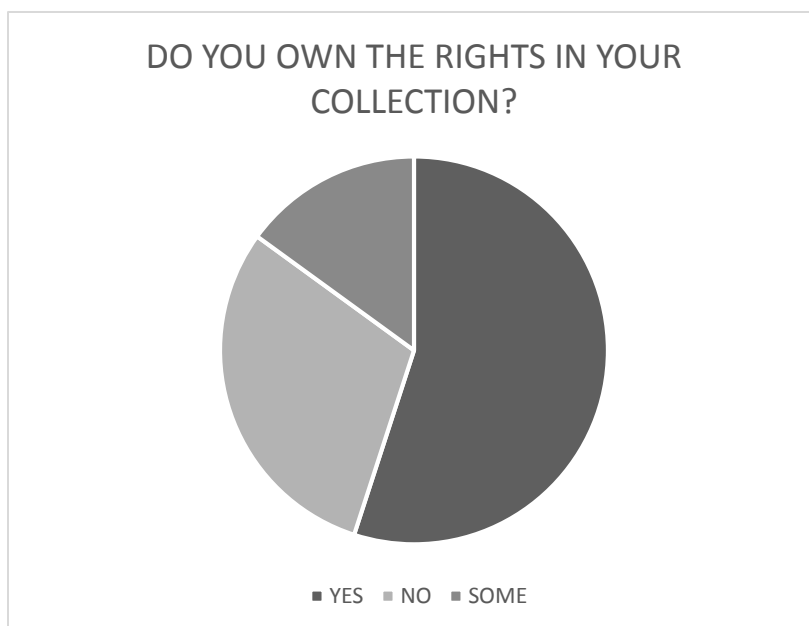


According to respondents most of the materials held are original recordings, they are not recordings that were commercially published (by a third party). Just 25% of respondents had commercially published materials in their collections. This statistic highlights the unique nature of many of these recordings, they are not purchased examples of a published piece, nor are they masters of a commercially distributed work. The majority of the items held within the collections we surveyed are unique and irreplaceable.



While the fact that much of the material held is unique and in many cases self-created by the collecting organisation, this does not necessarily imply that that organisation may have the right to redistribute the material. In many cases, taking for example performing arts groups and theatre companies, the ability to provide access to the material via a digital platform may first require clearance from any writer, actor or performer whose work may appear in the recording. It is the case that for much of these recordings no license to redistribute was sought at the time the recording was made and therefore clearance would now need to be sought for reuse purposes.

Despite this fact 70% of collection holders stated that they owned all, or in 15% of cases some, of the rights and were unencumbered in this regard. It is the opinion of the authors that this is an area which will require further clarification and the issue of rights and rights clearance for digital access is an area that will also benefit greatly from investment into training and resources to assist custodians in better understanding the challenges and proactively solving the issues relating to intellectual property rights in moving image collections



#### SUMMARY:

- 2 of the 54 respondents had a dedicated staff member looking after their collection, one in four had a part-time person, and the majority had no specific individual tasked.
- Most custodians are self-taught with two professionally trained in AV archiving.
- Most collections do not have any catalogue or database.
- For the larger cultural institutions with wider collections management systems in place the ISAD (G) standard was the most widely adopted.
- 1 in 4 collections contained some commercially published materials.
- For many rights is an issue in relation to distribution requiring clearance from subjects and depositors.



‘The collection contains interviews with well-known and lesser known actors, directors, producers and artists about their work. We also hold videos about our building and history, which is of great historical significance.’

- Smock Alley Theatre

# PART 4: GOING DIGITAL – DIGITAL PRESERVATION AND ACCESS PROJECTS IN IRELAND

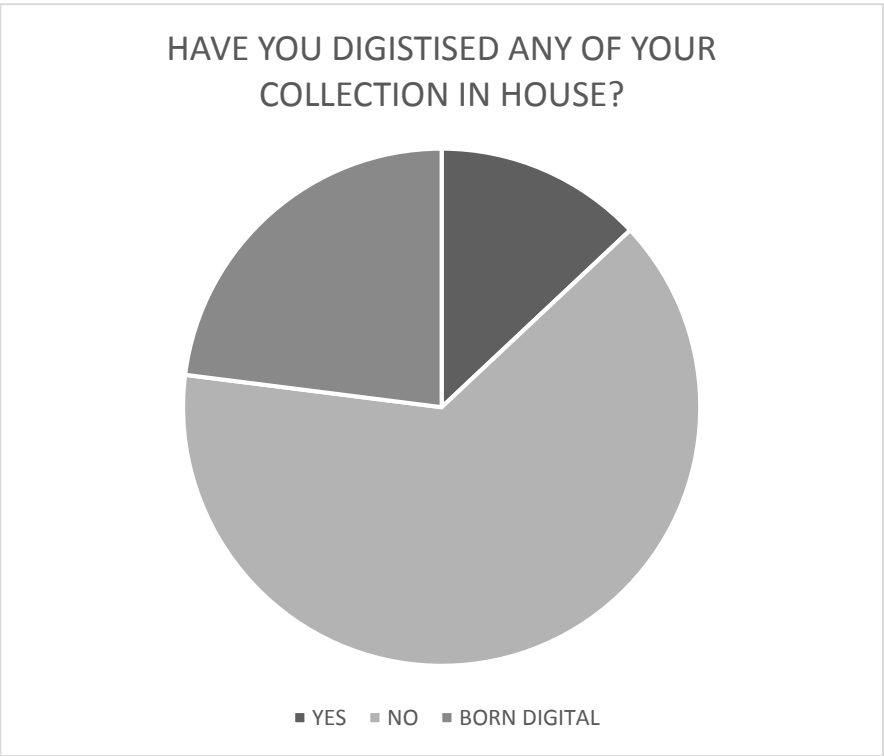
It is clear that there has been a significant increase in the amount of moving image material being collected by organisations in Ireland in recent years, driven by the explosion in digital media and the fact that video is now far cheaper to create and distribute than it was just 10 years ago. The volume of digital video files in Irish collections has also increased due to the digitisation of legacy moving image collections or items to support access projects and in some cases for preservation purposes.

By unit measure, digital video files account for 25% of all of the video assets we discovered during the survey yet the ability for organisations to create and store digital video files has only become viable in the past 10 years. This clearly indicates that Irish organisations are collecting more and will benefit from support in managing these growing digital collections in the future.

Close to 40% of respondents have digitised or outsourced the digitisation of some part of their video tape or film collections. In most cases the digitisation of film or broadcast video tapes to digital files is undertaken by external Post Production Studios or specialised AV Digitisation Service Companies.

In these cases, the majority have sent out individual items for specific projects rather than having a policy of systematic conversion of physical media to digital files. Approximately 10% of the organisations surveyed were in the process of digitising their collections and had converted 40% or more of their holdings.

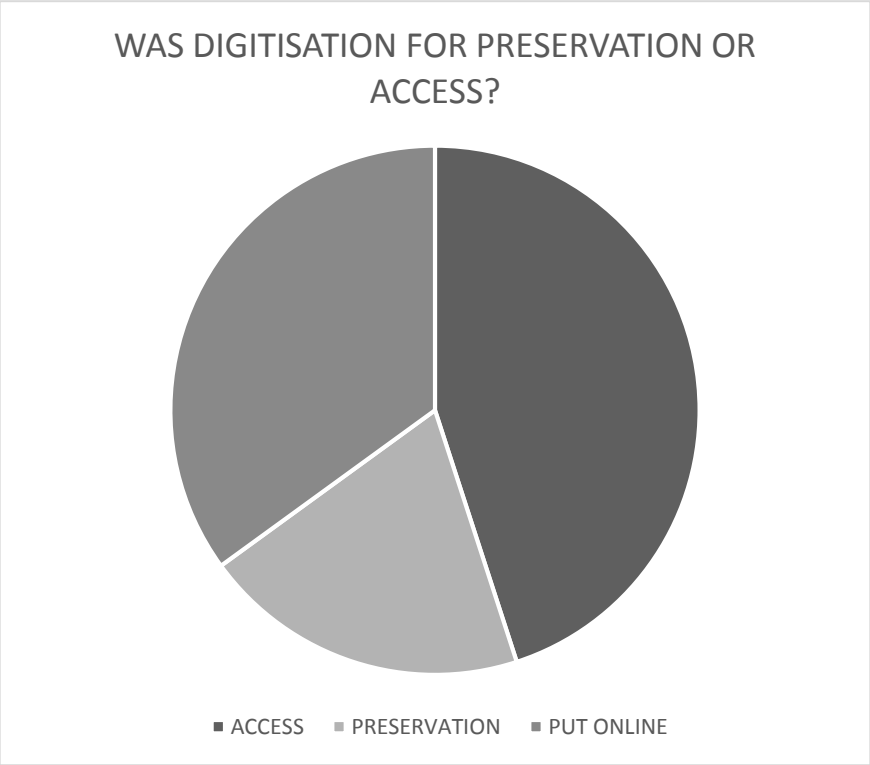
Reasons for digitisation are primarily access driven, whether to create a copy of a video or film to make it available on DVD or for research locally within an organisations computer network or to open it up to a wider online audience via the internet.





It is evident that the main focus for this digitisation work is to provide access and not to preserve the content in a digital format.

Just 40% of this group of respondents mentioned that they had undertaken digitisation to support web based access, a total of approximately 8 collections. In other examples video and film items had been converted to DVD as a means to provide access to the video, while this is a form of digitisation it is not digitisation to a file and not an optimal preservation technique.



It was noted that in many cases where digitisation has been undertaken to provide access to video assets the resulting files are typically compressed files that are suitable for online distribution. Compressed video file formats are generally not the best option for preserving video content as the data compression used to make the resulting video file smaller can compromise the quality of the image and audio signal they contain in comparison to the source. The amount of data compression used is proportional to the level of perceivable loss of visual and audio fidelity.

Clearly digital projects are well underway and digital collections are growing quickly across Ireland, with a significant proportion of organisations surveyed storing born digital video files and digitising some part of their collections for access. Clear national guidelines and policy advice would ensure that the results of these efforts are maximized by ensuring digitisation and preservation planning is done according to recognized standards that will ensure consistency and interoperability both nationally and within the wider European context.

## SUMMARY:

- Digital Collections are growing faster than any previous collection type.
- There are several new collections that are 'born digital' and contain no physical media.
- 40% of collections have undertaken some form of digitisation work.
- Systematic digitisation projects are underway in 10% of collections, some of whom have digitised over 40% of their moving image collections.
- Digitisation projects tend to be driven by access requirements and the resulting outputs do not always address preservation issues & opportunities.

# SUMMARY

The preservation of audio-visual heritage and participation in digital access projects is of both cultural and economic value to Ireland. Opportunities exist for Ireland to take a leading role in, and benefit from, European programmes that focus on preservation and access to cultural content, specifically film heritage, at a time when consumer behaviour is moving towards 'on-demand' digital and social media driven video consumption.

As Ireland competes for a growing share of the international TV and Film production business, strong digital initiatives that connect specialist collections with creatives and facilitate reuse of archival material in digital platforms serve to strengthen our indigenous industries competitive position. Digitisation of audio-visual heritage opens up new models for distribution and exploitation, both cultural and commercial. Strong examples of such digital initiatives are evident in projects such as the IFI Player, the Irish Film Institute's online video player which launched in Sept 2016 which delivers Irish audio-visual heritage to online audiences around the world ([www.ifoplayer.ie](http://www.ifoplayer.ie)).

This survey has uncovered a substantial number of unique collections containing a wide range of different media types both film and video; with targeted investment these organisations can be supported to manage their collections effectively in a digital context and open up the potential for participation in digital projects of this type.

The adoption of agreed standards drives interoperability and efficiency, they facilitate participation and collaboration in the context of wider inter-organisational or international projects therefore it is of high importance within the context of the EU Recommendations on Film Heritage and Digital Preservation that Ireland creates policies and guidelines in this area.

Opportunities exist to introduce economy and efficiency into enabling digital preservation and access to audio visual collections in Ireland through training, standards and delivery of technical support services. This is particularly relevant to smaller, less established collections, or those not affiliated to larger national collections where there is evidence of best practice and adoption of standards.

The EU Commission created recommendations to support a coordinated effort in audio-visual preservation among Member States. The recommendations delivered strong signals regarding the need to avoid duplication of effort, introduce scale into supporting services to deliver economies of scale and drive standards to ensure interoperability of outputs within and between EU members. The results of this survey demonstrate that Ireland has a rich and diverse audio-visual heritage distributed across a range of engaged and passionate stakeholders. Ireland can align its national activities within this broader European context, by investing in training, committing to standards and establishing centres of excellence for the digitisation and digital preservation of culturally valuable moving image collections.

## APPENDIX I - SUMMARY OF REPORT FINDINGS

- Of the 26,282 moving image assets found 5% were film reels, 70% were Video Tapes, 25% were Digital Files.
- Film was found in 22 locations, total 1,250 film reels, mixed 8mm, 16mm and 35mm.
- Video Tape was found in 44 locations, total 18,300 tapes both professional and consumer formats of over 10 varieties.
- Digital Video Files were found in 29 locations and total 6,732 files, both high and low resolution of over 10 formats.
- Of the 54 collections identified and surveyed, 98% of respondents stated that their collections contained unique materials of cultural importance.
- A majority of 76% of collections are growing and continue to create and receive moving image content.
- Just 1 in 5 collections buy or acquire published media, most of the collections contain original work.
- Just one collection was found to collect as part of its statute.
- Close to three quarters of collections do not have a preservation plan in place.
- Film was found in 22 locations, just 4 had the capability to view the film, 16 & 8mm was found in the majority of collections with 35mm in 7 locations.
- Video was found in 44 locations, with 40% having playback capability for consumer formats (DVD or VHS) but very little evidence of capability to playback professional video formats.
- 20% of video collections contain high risk formats such as U-Matic or Open Reel which are physically degrading and becoming ever harder to playback due to a global shortage of functioning playback equipment.
- Digital Files were found in abundance across 29 collections, digital collections are growing faster than physical media collections however a lack of standards relating to file formats or digital preservation and storage strategies may store up problems for the future.
- Just 2 of the 54 respondents had a dedicated staff member looking after their collection, one in four had a part time person, the majority had no specific individual tasked.
- Most custodians are self-taught with two professionally trained in AV archiving
- Most collections do not have any catalogue or database.
- For the larger cultural institutions with wider collections management systems in place the ISAD (G) standard was the most widely adopted.
- Only 1 in 4 collections contained published materials.
- For many rights is an issue in relation to distribution requiring clearance from subjects and depositors.
- Digital Collections are growing faster than any previous collection type.
- There are several new collections that are 'born digital' and contain no physical media.
- 40% of collections have undertaken some form of digitisation work.
- Systematic digitisation projects are underway in 10% of collections, some of whom have digitised over 40% of their moving image collections.
- Digitisation projects tend to be driven by access requirements and the resulting outputs do not always address preservation opportunities.

## APPENDIX II : EU COMMISSION RECOMMENDATIONS

The European Parliament's and Council's Recommendation to Member States on film heritage and the competitiveness of related industrial activities (16/11/2005) invites Member States to improve the conditions of conservation, restoration and exploitation of film heritage and remove obstacles to the development and full competitiveness of the European film industry by encouraging policies of innovation, research and technological development in the field of conservation and restoration of cinematographic works, improving its accessibility for educational, cultural, research or other non-commercial uses in compliance with copyright and related rights, adopting appropriate measures to increase the use of digital and new technologies in the collection, cataloguing, preservation and restoration of cinematographic works.

EU countries are asked to inform the Commission every two years of measures taken in response to this Recommendation. Several reports on the implementation of the Recommendation have been published so far:

1st Report on the Recommendation to Member States on Film Heritage (8/2008)

2nd Report on the Recommendation to Member States on Film Heritage (7/2010)

3rd Report (12/2012)

4th Implementation Report (10/2014)

Source: <http://www.ace-film.eu>

## COMMISSION RECOMMENDATION

of 24 August 2006

on the digitisation and online accessibility of cultural material and digital preservation

### HEREBY RECOMMENDS THAT MEMBER STATES:

1. gather information about current and planned digitisation of books, journals, newspapers, photographs, museum objects, archival documents, **audio-visual material** (hereinafter 'cultural material') and create overviews of such digitisation in order to prevent duplication of efforts and promote collaboration and synergies at European level;
2. develop quantitative targets for the digitisation of analogue material in archives, libraries and museums, indicating the expected increase in digitised material which could form part of the European digital library and the budgets allocated by public authorities;
3. encourage partnerships between cultural institutions and the private sector in order to create new ways of funding digitisation of cultural material;
4. set up and sustain large scale digitisation facilities, as part of, or in close collaboration with, competence centres for digitisation in Europe;
5. promote a European digital library, in the form of a multilingual common access point to Europe's distributed - that is to say, held in different places by different organisations - digital cultural material, by: (a) encouraging cultural institutions, as well as publishers and other rightsholders to make their digitised material searchable through the European digital library, 15 OJ C 162, 6.7.2002. p.4. EN 10 EN (b) ensuring that cultural institutions, and where relevant private companies, apply common digitisation standards in order to achieve interoperability of the digitised material at European level and to facilitate cross-language searchability;
6. improve conditions for digitisation of, and online accessibility to, cultural material by: (a) creating mechanisms to facilitate the use of orphan works, following consultation of interested parties, (b) establishing or promoting mechanisms, on a voluntary basis, to facilitate the use of works that are out of print or out of distribution, following consultation of interested parties, (c) promoting the availability of lists of known orphan works and works in the public domain, (d) identifying barriers in their legislation to the online accessibility and subsequent use of cultural material that is in the public domain and taking steps to remove them;

7. establish national strategies for the long-term preservation of and access to digital material, in full respect of copyright law, which: (a) describe the organisational approach, indicating the roles and responsibilities of the parties involved and the allocated resources, (b) contain specific action plans outlining the objectives and a time-table for the specific targets to be met;

8. exchange information with each other on the strategies and action plans;

9. make provision in their legislation so as to allow multiple copying and migration of digital cultural material by public institutions for preservation purposes, in full respect of Community and international legislation on intellectual property rights;

10. when establishing policies and procedures for the deposit of material originally created in digital format take into account developments in other Member States in order to prevent a wide divergence in depositing arrangements;

11. make provision in their legislation for the preservation of web-content by mandated institutions using techniques for collecting material from the Internet such as web harvesting, in full respect of Community and international legislation on intellectual property rights;

Follow-up to this Recommendation EN 11 EN 12. inform the Commission 18 months from the publication of this Recommendation in the Official Journal of the European Union, and every two years thereafter, of action taken in response to this Recommendation.

Done at Brussels, 24 August 2006



## LIST OF CONTRIBUTING ORGANISATIONS

Axis Ballymun  
Barnstorm  
Common Ground  
Crash Ensemble  
Crawford Art Gallery  
Dance Theatre of Ireland  
Dedalus Press  
Department of Foreign Affairs  
and Trade  
EVA International  
Filmbase  
Fresh Film Festival  
Glebe House and Gallery  
Glucksman Library, University of  
Limerick  
Irish Architectural Archive  
Irish Association of Youth  
Orchestras CLG  
Irish Modern Dance Theatre  
Irish Museum of Modern Art  
Irish Traditional Music Archive  
ISACS Network  
James Hardiman Library  
Leitrim County Council Arts  
Office  
Limerick City and County Council  
Limerick City Gallery of Art  
Limerick Film Archive

Limerick Museum  
Louth County Council  
Military Archives  
Monaghan County Museum  
Music for Galway  
Music Network  
Na Píobairí Uilleann  
National Irish Visual Arts Library  
National Library of Ireland  
National Museum of Ireland  
Offaly County Council  
Opera Theatre Company  
Pan Pan Theatre  
Rough Magic  
Royal College of Surgeons in  
Ireland (RCSI)  
Sligo Heritage  
Smock Alley Theatre  
The Gate Theatre  
Tipperary County Council  
UCC Library  
UCD Cultural Heritage Collection  
UCD Irish Poetry Reading Archive  
UCD National Folklore Collection  
Upstate Theatre Project  
Waterford Youth Arts

# The Film Heritage Advisory Group

The Film Heritage Advisory Group was established in 2014 under the auspices of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. It brings together representatives from appropriate groups within the Irish cultural sector, for the purposes of identifying and consolidating existing preservation and access provision in the area of moving image heritage; it also seeks to promote best practice and implement EU recommendations for this sector of cultural heritage. The group references the 2005 Recommendation<sup>[1]</sup> of the European Parliament and the Council (of 16 November 2005) on "Film heritage and the competitiveness of related industrial industries", which was published with the aim of highlighting the fundamental importance of film heritage within European society and encouraging Member States to proactively to preserve and disseminate their national film collections. The Film Heritage Advisory Group is chaired by the Head of the IFI Irish Film Archive and comprises representatives from, the Department of Culture, Heritage and the Gaeltacht, the National Library of Ireland, the Irish Film Board, the Arts Council, the Broadcasting Authority of Ireland, the Heritage Council and the Digital Repository of Ireland.

## Members of the Film Heritage Advisory Group's Moving Image Collections

- The IFI Irish Film Archive holds a collection of over 30,000 cans of film and 15,000 broadcast tapes. As its holdings are well documented they were not considered within this survey.
- The Department of Culture Heritage and the Gaeltacht does not have a moving image collection.
- The Heritage Council does not have a moving image collection.
- The Irish Film Board preserves a copy of every production it funds, this collection is held by the IFI Irish Film Archive and therefore was not included in this survey.
- The Broadcasting Authority of Ireland preserves a copy of every production it funds, this collection is held by the IFI Irish Film Archive and therefore was not included in this survey.

---

<sup>[1]</sup> OJ L 323, 09.12.2005  
[http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l\\_323/l\\_32320051209en00570061.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_323/l_32320051209en00570061.pdf)

- The Digital Repository of Ireland holds a small number of digital moving images from several depositors; collections are projected to grow as DRI is a relatively new preservation infrastructure., its holding were not included in this survey.
- The Arts Council preserves a copy of film works that it funds, this collection is held by the IFI Irish Film Archive and therefore was not included in this survey.
- The National Library of Ireland holds a collection of approximately 1,000 film and tape items, these were included in this survey.



**Moving Media Ltd** are specialists in audio-visual archive digitisation and access projects, founded in 2003 by Simon Factor the company has deep knowledge and experience of audio, video and film preservation technology and techniques. In more recent years the company has been a stakeholder in EU funded projects to advance audio-visual preservation in Europe and the architects of a number of award winning online video projects that open up access to important film collections. [www.movingmedia.tv](http://www.movingmedia.tv)




All images are subject to Creative Commons Zero (CC0) license





**The authors thank all those individuals who gave their time generously to completing the survey and to be interviewed on the subject:**




Treasa Harkin, Joanne Carroll, Ciarda Tobin, John Scott, Carol Staunton, Adrian Kelly, Judith Finlay, Alan Fitzpatrick, Donna Romano, Lucy Medlycott, Terry Moylan, Beatrice Kelly, Osgar Dukes, Allin Gray, SORCHA CARROLL, Meadhbh Murphy, Aoife White, Loretta Yurick, Siobhán Geoghegan, Ger Nolan, Louise Walsh, Neva Elliott, Colum O'Riordan, Crónán Ó Doibhlin, Ken Bergin, Anna Lardi Fogarty, Cathy Hanrahan, Niamh Ní Chonchubhair, Mary Penny, Brian Hodgkinson, Anna Bale, Siobhan O'Reilly, Padraic Kennedy, Lynne Parker, Emer Ni Cheallaigh, Teerth Chungh, Felicia Tan, Emma Dwyer, Pat Boran, Declan Mallon, Kieran Hoare, Ursula Byrne, Melanie Scott, Brian Harten, Mike Mulligan, Paul Balbirnie, Declan McLaughlin, Sinead O'Reilly, Joe Mc Gowan, Philip Delamere, Carol Staunton, Andy Hogg, Jean O'Donovan, Sheila Deegan, Liam Kelly, Louise Donlan, John Hutchinson, Jennifer Traynor, Hazel Burke, Fiona Kearney, Mary Clarke, Eamonn Quinn, Trevor White, Declan Gibbons, Cian O'Brien, Chantal McCormick, Brian Duffy, Tony Sheehan, Sonya Perkins, Bridget Webster, Sian Cunningham, Caoimhe Reidy, Sharon Rollston, Rose Halton, Rosemary Collier, Nuala Roche, Rebecca Gale, Patricia McBride, Nicki French Davis, Mona Consadine, Mary O'Dea, Mary Boland, John McDonough, Averyl Dooher, Anne Davoren and all others who answered and participated.


# GLOSSARY

<b>8 mm, 16 mm, 35 mm</b>	<b>Refers to Film Gauge:</b> a physical property of photographic or motion picture <b>film</b> stock which defines its width.	
<b>AVI</b>	<b>Audio Video Interleaved</b> (also <b>Audio Video Interleave</b> ), known by its initials <b>AVI</b> , is a multimedia container format introduced by Microsoft in November 1992 as part of its Video for Windows software. AVI files can contain both audio and video data in a file container that allows synchronous audio-with-video playback.	
<b>Betacam</b>	A family of half-inch professional videocassette products developed by Sony in 1982. In 1986, <b>Betacam SP</b> was developed, which increased horizontal resolution to 340 lines. While the quality improvement of the format itself was minor, the improvement to the VTRs was enormous, in quality, features, and particularly, the new larger cassette with 90 minutes of recording time. Betacam SP (for "Superior Performance") became the industry standard for most TV stations and high-end production houses until the late 1990s.	
<b>Born digital</b>	Denoting texts or recordings produced in digital form, rather than having been converted from print or analogue equivalents.	
<b>Cloud storage system</b>	Cloud storage is a model of data storage in which the digital data is stored in logical pools, the physical storage spans multiple servers (and often locations), and the physical environment is typically owned and managed by a hosting company.	
<b>Digitisation:</b>	The representation of an object, image, sound, document or signal (usually an analogue signal) by generating a series of numbers that describe a discrete set of its points or samples. The term digitisation is often used when diverse	

	forms of information, such as text, sound, image or voice, are converted into a single binary code.	
<b>Digital Betacam:</b>	(Commonly referred to as <i>DigiBeta</i> , <i>D-Beta</i> , <i>DBC</i> or simply <i>Digi</i> ) was launched in 1993. It supersedes both Betacam and Betacam SP.	
<b>DVD:</b>	(An abbreviation of " <b>digital versatile disc</b> or " <b>digital video disc</b> ) is a digital optical disc storage format invented and developed by Philips, Sony, Toshiba, and Panasonic in 1995.	
<b>DV or MiniDV</b>	All DV cassettes use tape that is 1/4 inch (6.35 mm) wide. Small cassettes, also known as <i>S-size</i> or <b>MiniDV</b> cassettes, originally aimed at the consumer market. Medium or <i>M-size</i> cassettes are used in professional Panasonic equipment and are often called <i>DVCPRO tapes</i> . Large or <i>L-size</i> cassettes are accepted by most standalone DV tape recorder/players. The L-size cassette can be used in both Sony and Panasonic professional equipment.	
<b>Digital video file</b>	A <b>video file</b> format is a type of <b>file</b> format for storing <b>digital video</b> data on a computer system. <b>Video</b> is almost always stored in compressed form to reduce the <b>file</b> size. The coded <b>video</b> and audio inside a <b>video file</b> container (i.e. not headers, footers and metadata) is called the essence.	
<b>Film</b>	A thin flexible strip of plastic or other material coated with light-sensitive emulsion for exposure in a camera, used to produce photographs or motion pictures.	
<b>Film reel</b>	A <b>spool</b> on which <b>film</b> , especially motion-picture <b>film</b> , is wound.	
<b>H264</b>	<b>H.264</b> or MPEG-4 Part 10, Advanced Video Coding (MPEG-4 AVC) is a block-oriented motion-compensation-based video compression standard. As of 2014 it is one of the most commonly used formats for the recording, compression, and distribution of video content.	

<b>HDCAM:</b>	Introduced in 1997, is a high-definition video digital recording videocassette version of digital Betacam.	
<b>ISAD(G) :</b>	(General International Standard Archival Description) defines the elements that should be included in an archival finding aid.	
<b>Metadata Standard:</b>	A requirement which is intended to establish a common understanding of the meaning or semantics of the data, to ensure correct and proper use and interpretation of the data by its owners and users. To achieve this common understanding, a number of characteristics, or attributes of the data have to be defined, also known as metadata.	
<b>MJPEG</b>	<b>Motion JPEG (M-JPEG or MJPEG)</b> is a video compression format in which each video frame or Interlaced field of a digital video sequence is compressed separately as a JPEG Image.	
<b>MOV</b>	<b>.mov is the filename extension used for Quicktime. QuickTime File Format (QTFF)</b> is a computer <a href="#">file format</a> used natively by the <a href="#">QuickTime</a> framework	
<b>MPEG</b>	The <b>Moving Picture Experts Group (MPEG)</b> is a working group of authorities that was formed by ISO and IEC to set standards for audio and video compression and transmission	
<b>MXF</b>	<b>Material eXchange Format (MXF)</b> is a container format for professional digital video and audio media defined by a set of SMPTE standards. A typical example of its use is for delivering adverts to TV stations	
<b>Open reel video tape</b>	Up to the early 1970s video tape formats were 'open reel'. The video tape was not enclosed in a cassette and required an operator to 'thread' the tape for playback. Open reel tape exists in a range of gauges including ½", 1" and 2" commonly known as Quad (see pic right). These formats are particularly at risk and playback equipment is extremely scarce.	

<b>PRORES</b>	<b>Apple</b> ProRes is a lossy video compression format developed by Apple Inc. for use in post-production that supports up to 8K. ProRes is a line of intermediate codecs, which means they are intended for use during video editing, and not for practical end-user viewing. The benefit of an intermediate codec is that it retains higher quality than end-user codecs while still requiring much less expensive disk systems compared to uncompressed video.	
<b>UMatic:</b>	A videocassette format developed by Sony and introduced to the market in September 1971. It was among the first video formats to contain the videotape inside a cassette.	
<b>Video File Format</b>	A type of file format for storing digital video data on a computer system. Video is almost always stored in compressed form to reduce the file size. A video file normally consists of a container format containing video data in a video coding format alongside audio data in an audio coding format. The container format can also contain synchronization information, subtitles, and metadata such as title.	
<b>Video8/Hi8/Digital8</b>	Introduced in 1985 the 8mm video format refers informally to the original Video8 format and its improved successor, as well as a more recent digital recording format known as Digital8.	
<b>Video hosting platform</b>	A video hosting platform or <b>online video platform</b> (OVP) is a service that enables users to upload, convert, store and play back video content on the Internet, often via a structured, large-scale system that can generate revenue. YouTube is a leading example.	
<b>VHS:</b>	(Video Home System) is a standard for consumer-level analogue video recording on tape cassettes. Developed by JVC in the early 1970s.	

<b>Video tape</b>	<p><b>Videotape</b> is magnetic tape used for storing video and usually sound in addition. Information stored can be in the form of either an analog signal or digital signal. Videotape is used in both video tape recorders (VTRs) or, more commonly, videocassette recorders (VCRs) and camcorders.</p>	
-------------------	--	---