



Irish Film Institute



LOOP
LINE

Safeguarding the Digital Legacy
IFI SCRIPTS & Loopline
Digital Preservation Coalition Webinar
April 2019

IFI Irish Film Archive Staff

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IFI Irish Film Archive

National cultural institution for film in Ireland
Remit to **Exhibit, Educate** and **Preserve**

Preservation= Ireland's National Film Archive:

Custodian of Ireland's moving image heritage,
750 donors plus State funded material from Arts
Council, BAI and Screen Ireland

30,000 cans of film and 15,000 broadcast tapes

Collections spanning 1897 to present day in
climate controlled vaults

Archive

IFI Irish Film Archive:
Safeguarding and sharing Ireland's
precious moving image heritage

IFI Digital Mandate

The digital preservation mandate of the IFI is twofold:

- The IFI must be able to accept material currently being produced in a digital format (*born digital*) by the broadcast & film industry and ensure it is both preserved & accessible in the future.
- IFI must digitise its existing analogue collections (both tape and film) to a high resolution digital format to protect them against media obsolescence and format deterioration, ensuring that they are preserved and accessible.



Digital Drivers

Digital technologies benefits :

- cheaper creation,
- cheaper distribution,
- lossless copying,
- a wide range of access activities
- **WE HAD NO CHOICE !**



Why was it such a challenge?

- Speed of change: little change for 100 years, then rapid move of film production, distribution and exhibition to digital.
- Whole new set of technical and financial challenges for Archivists requiring a complex set of IT based solutions.
- Lack of consensus standards or formats for digital preservation.
- Lack of understanding at stakeholder, funder and policy maker level.
- Budget, initial and ongoing costs.



Digital Strategy Preparation



The IFI set up 2 internal research groups to look at digital preservation:

- Researched the activities of Archive colleagues globally & examined the recommendations of various expert professional bodies.
- Looked at international examples of best practice relating to digitisation, file formats, metadata standards, storage and access technology.
- Worked with our technical partners to formulate a scalable, cost effective and practical digital preservation strategy.

IFI's requirements...

for any procedure or technical solution

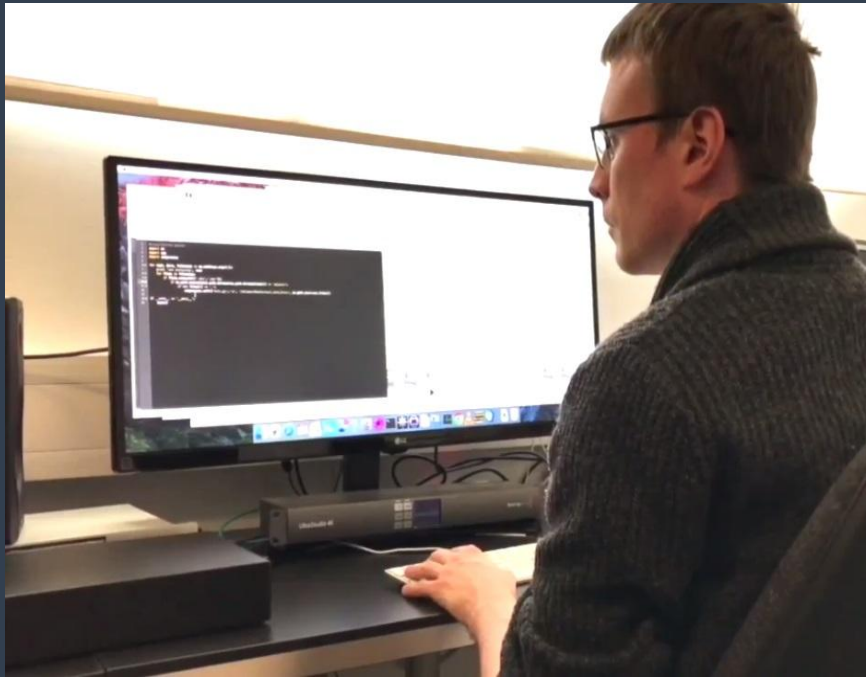
Flexibility. Systems designed on a modular basis with each component capable of functioning as an independent unit or within a larger network.

Scalability. Processes designed to allow for integration of future technologies & storage operations, when technology becomes available and as funding permits.

Sustainability. Solutions chosen that can be maintained within organisational resources and development of new partner agreements.



Digital Strategy



Created a Digital Strategy document (DPAS)

Approached government & industry for financial support.

Developed international relationships.

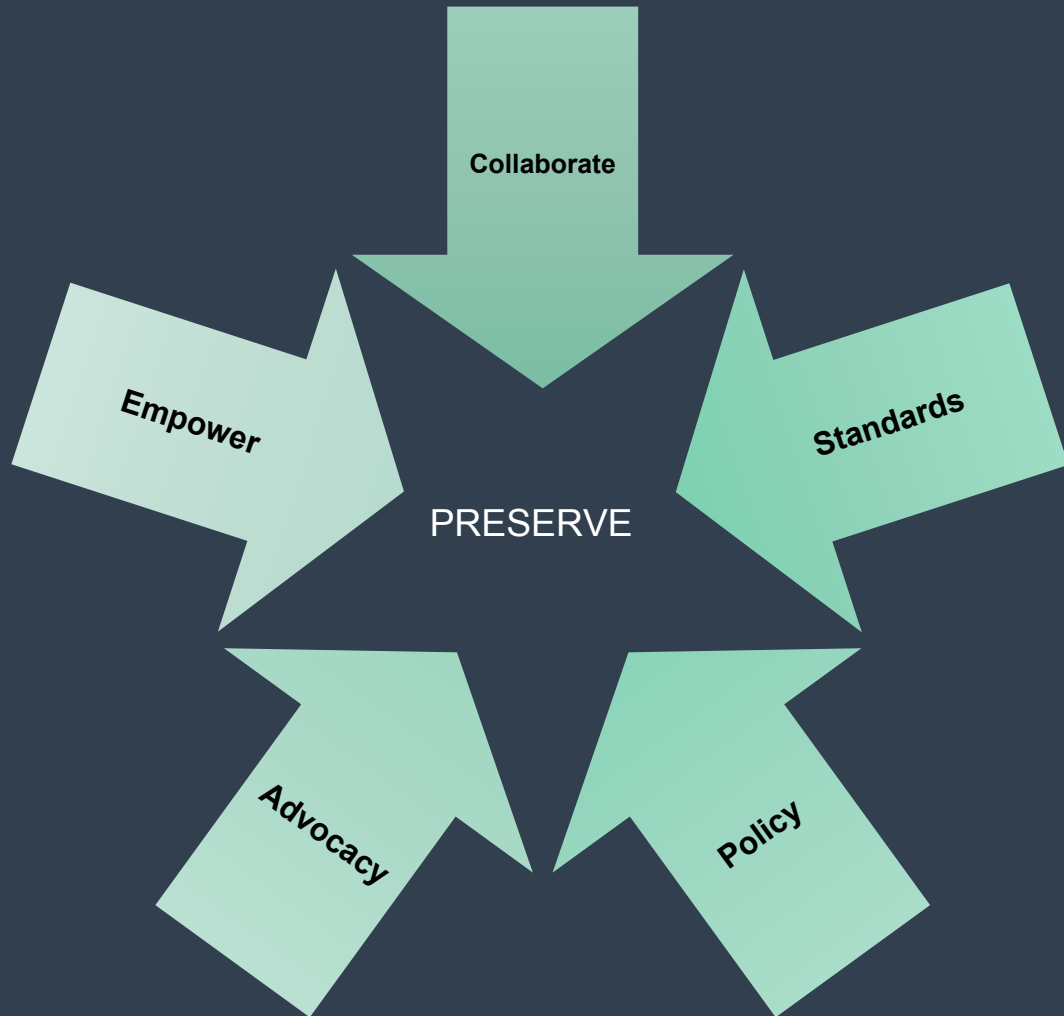
Implemented open source solutions to introduce a range of microservices.

Introduced in- house scanning and restoration.

Increased access to the collections via IFI Player.

Received funding from the Broadcasting Authority of Ireland to assess, conserve, catalogue, digitise and make available the collection of independent production company Loopline.

The Loopline project was an opportunity to put our core principles into action and test IFI Scripts end to end.



Loopline Project

IFI Irish Film Archive:

Kasandra O'Connell

Raelene Casey

Kieran O'Leary

Aoife Fitzmaurice

Brian Cash

Loopline Film Ltd:

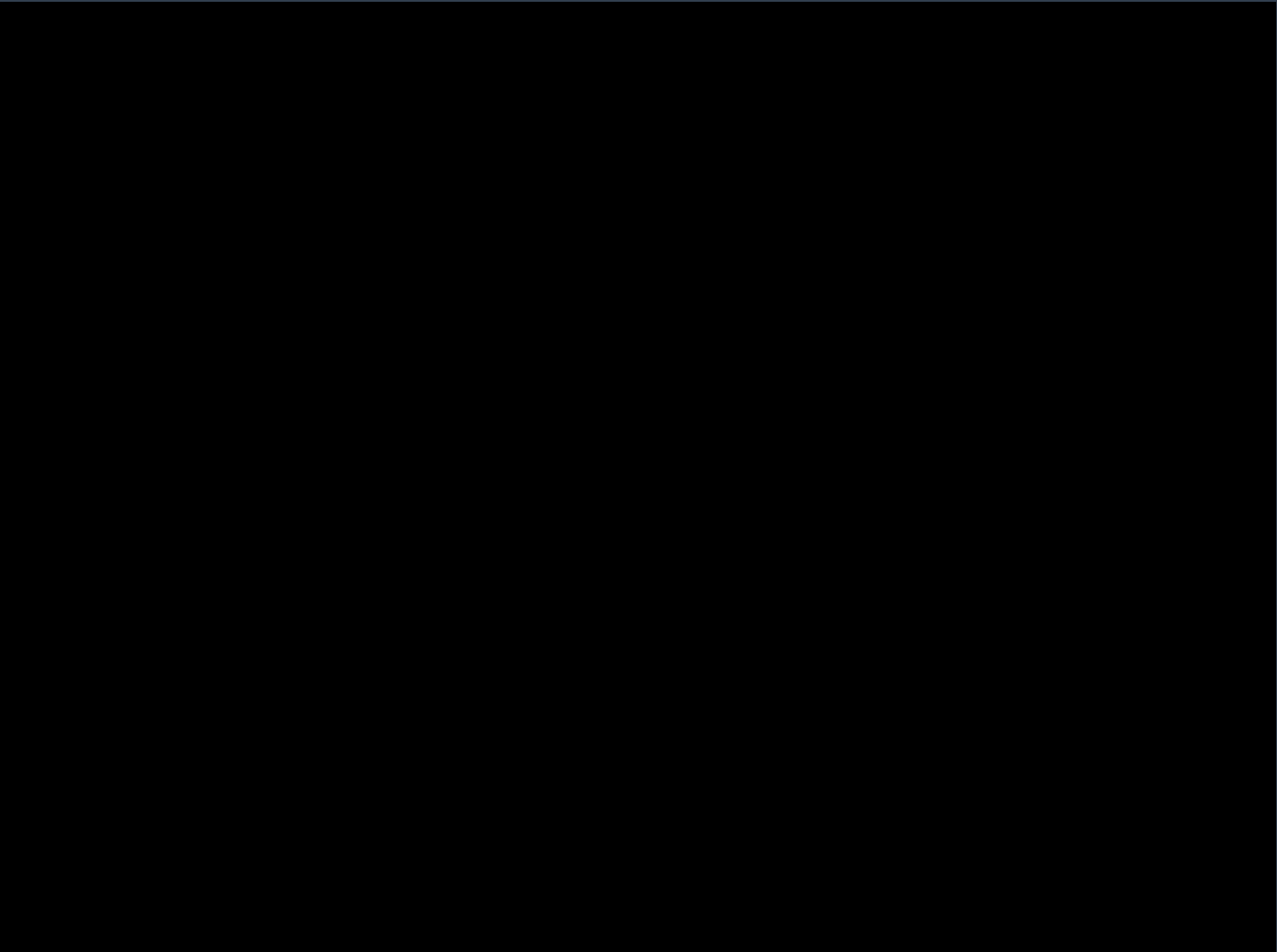
Sé Merry Doyle

Eugene Finn



The Home of Creative Documentary

LOOP
LINE



Loopline Project - collection content

Documentaries/ original camera material (Rushes)

- Social history & social justice
- (re)development of Dublin & architecture
- Irish crafts & folklife
- Cultural figures
- IRA/The Troubles

Magnetic Tape Formats

Betacam SP

Digital Betacam

MiniDV

DVCam

DAT



In-house Tape Migration

Monitor and Control

Enhance Knowledge and Skills

Guidelines for Migration of each Tape Format

Guidelines for Quality Control including QC and Deck Maintenance



Hard Drives

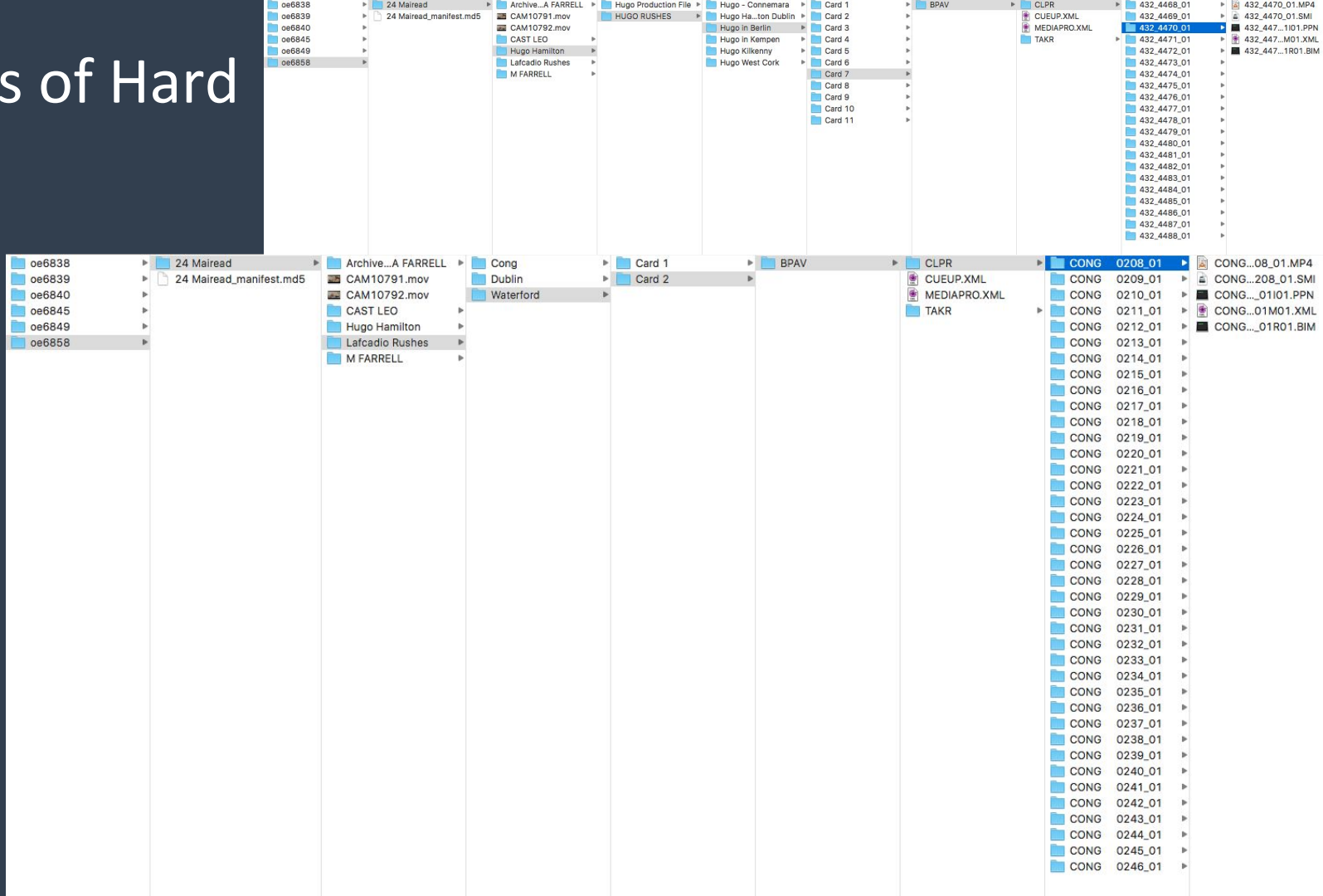
XDCam

P2

Converted Quicktimes



Examples of Hard Drives



IFIscripts

microservice
architecture

open source software

preservation context

The screenshot shows the GitHub repository page for **kieranjol / IFIscripts**. The repository has 1,362 commits, 23 branches, 7 releases, and 10 contributors. The latest commit is `fa9016d` from 4 days ago. The repository is licensed under MIT.

Navigation tabs include: **Code**, Issues (53), Pull requests (6), Projects (0), Wiki, and Insights.

Detailed documentation is available here: <http://ifiscripts.readthedocs.io/en/latest/index.html>
<http://ifiscripts.readthedocs.io/en/...>

Tags: `premis`, `manifest`, `transcode`, `tiff-files`, `batch-processing`, `ffv1`, `dcp`, `digital-preservation`, `metadata`

Branch: `master` | New pull request | Create new file | Upload files | Find File | Clone or download

File	Description	Time
<code>docs</code>	alp_documentation - move back into main folder for now	3 months ago
<code>legacy_scripts</code>	move unused scripts to legacy_scripts	3 months ago
<code>26_XYZ-22_Rec709.cube</code>	Updated LUT for chromatic adaptation	7 months ago
<code>LICENSE.txt</code>	changes License so that IFI is credited	11 months ago
<code>MANIFEST.in</code>	setup/manifest - include extra files as data_files	3 months ago
<code>Objects.py</code>	Objects - adds windows fix from simsong/dfxml@f3dcf40	5 months ago
<code>README.rst</code>	README.rst - larger heading	8 months ago
<code>accession.py</code>	ifiscripts - python3 print() changes	3 months ago
<code>accession_register.py</code>	accession_register - finds episode titles, fixes #308	5 months ago
<code>as11fixity.py</code>	as11fixity - PEP-08 cleanup	2 years ago
<code>batchaccession.py</code>	batchaccession - do not create pbcore/technical CSV if format is list...	3 months ago
<code>batchmetadata.py</code>	batchfixity/batchmetadata - PEP08 compliance	2 years ago
<code>batchrename.py</code>	batchrename - PEP08 compliance	2 years ago
<code>batchvalidate.py</code>	batchvalidate - adds basic proof of concept batch-fixity-checker - do...	2 months ago
<code>bitc.py</code>	bitc - allows bitc.py to be imported by other scripts	29 days ago
<code>concat.py</code>	fixes OE number input check - fixes #247	11 months ago
<code>copyit.py</code>	copyit - fixes #327 where different line endings incorrectly reported...	12 days ago
<code>dcpaccess.py</code>	dcpaccess - adds -lowres option for @matmat , fixes #298	3 months ago
<code>dcpfixity.py</code>	dcpfixity - dont force bagit	2 years ago
<code>dcpsubs2srt.py</code>	dcpsubs2srt - PEP08 compliance	2 years ago
<code>deletefiles.py</code>	print improvements	5 days ago
<code>dfxml.py</code>	Objects/dfxml - actually adds sha512 support	a year ago
<code>durationcheck.py</code>	Duration check - adds mkv to search	2 years ago

Automated workflows

Submission Information Packaging

Archive Information Packaging

Normalisation of objects

Creation of access proxies

Harvesting PBCore metadata xmls

Concatenating clips from Camera
Cards


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- aaa0281

IFIscripts

github.com/kieranjol/IFIscripts

ifiscripts.readthedocs.io

 ifiscripts
latest

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docs passing

Introduction

Summary

These are Python 2.7 scripts that facilitate collections management workflows within the IFI Irish Film Archive. These scripts have been tested in OSX, Windows 7 & 10, Ubuntu 14.04 & 16.04. They are located here on github: <https://github.com/kieranjol/IFIscripts>

Most scripts take either a file or a directory as their input, for example `makeffv1.py filename.mov` or `premis.py path/to/folder_of_stuff`. (It's best to just drag and drop the folder or filename into the terminal as this provides the absolute path).

We want the project to be as reuseable as possible in different institutions and contexts. Some scripts, particularly anything to do with `Object Entry` or `Accessioning` will be quite IFI specific, but other scripts such as `makeffv1.py`, `dcpaccess.py` and many others have been used in a variety of contexts in several different countries.

The project uses the MIT license, and we encourage the reuse, modification and study of the scripts. It's always nice to hear when the scripts have been reused in some way, but it's not necessary to let us know.

Purpose

These python scripts facilitate much of our collections management procedures for digitised and born digital objects in the Irish Film Institute. We utilise a lot of open source tools, so we wanted to make these scripts as open as possible. This is why this project has the MIT License.

The Irish Film Institute has followed the SPECTRUM museum collections management standard for several years. These scripts attempt to follow SPECTRUM procedures while also utilising some of the concepts of the Open Archival Information System (OAIS). Initially the scripts only handled single video files, but they are now capable of handling:

- Digital Cinema Packages



We have already used this project as an example of our work in a number of teaching scenarios including a Masters level digital preservation module in partnership with the University of Maynooth and will continue to use it in future for example in the FIAT/IFTA training module which took place in November 2018

Outcomes

- Preserved this important collection, being published in mid April on IFI Player.
- Raised awareness of the importance of Digital Preservation (public, vendor, funder, management, educational level)
- Innovative tools & workflows already adopted by peer organisations.
- Act in an advisory capacity & partner with others to protect moving image heritage.
- Influenced national guidelines for digital preservation .
- Encouraged other archives to empower themselves & be brave.
- Example of what can be achieved with few resources but passion & commitment.

Next steps

- Expand IFIscripts to include other AV & non moving image formats.
- Continued upskilling of archive staff and R'n'D.
- Wave the flag for Digital Preservation through more high profile projects.
- Work with other Irish organisations to advise & assist in Digital Preservation.
- Consolidate International partnerships.
- Fund open source software development to ensure availability of affordable & sustainable solutions.
- Continue to teach digital preservation & open source tools at third level.
- Complete current DPAS and write the next one in 2020.



That's all folks, any questions?