

# Decaying Tape Archives?

*DIGITISE > SHOWCASE > MONETISE*



**BLUE  
LUCY**

COMPLEX MEDIA SOFTWARE, SIMPLIFIED.

The greatest asset of over 70 years of broadcasting is the content archive. Locked away in vaults around the world are tens of millions of hours of media...

...much of this content has more than nostalgic value, but one of the barriers to unlocking the value of this material - by conversion to modern file formats - is complexity and cost.

Blue Lucy Media has established itself as the go-to partners for video tape digitisation, preservation and monetisation by offering a simple solution to a burgeoning issue. The all-software based system is deployed on standard IT infrastructure which directly integrates with legacy hardware, such as VTRs and cassette robots to provide a highly automated and cost effective method to preserve tape based material. The workflow affords the highest possible quality in delivered assets, unparalleled efficiency in operation as well as a platform for forward exploitation.

## The operation: 8 Easy steps to the preservation and monetisation of legacy tape archives

1

### Tape classification

To begin, existing cassette tape inventory records are imported into the Blue Lucy Asset Manager (BLAM); if tape records do not exist then the BLAM will be used for physical asset registration as the first step in the process. The BLAM will manage the tapes, the resulting digitised file assets and associated records throughout the preservation and exploitation process. Archivists classify the content catalogue within the BLAM system and set priorities for ingest - typically vulnerable or high value content takes priority.

2

### Cassette handling & tape cleaning

The BLAM browser based user interface will prompt archive technicians to retrieve numbered cassettes from the archive library in batches. Prior to digitisation cassettes should be cleaned using a specialist cleaner to remove debris, dust and residue from the magnetic medium - this process greatly reduces drop-out during ingest and extends VTR head life. At this time, paper record reports stored in the cassette case may be scanned and appended to the tape record. Optical character recognition is used so that the text can be indexed by the BLAM.

Cleaned cassettes are loaded into a Sony Flexicart in batches of up to 80.

3

### Automated digitisation

The BLM Flexicart Service scans the tape barcodes and loads the ingest manifests – the manifest sets out the clips to be ingested from each tape, delineated by time-code. Tapes without records or time-code are ingested in their entirety.

The first cassettes are moved from the Flexicart tape bin to the VTRs and the BLM Ingest Services begins the conversion process. BLM Ingest can create up to four media files simultaneously, allowing for high bit-rate, full resolution preservation or edit files to be written, as well as lower bit-rate browse and web formats. The file writing process is independent for each asset so there are no mezzanine intermediaries created or transcoded derivatives.

Prior to file write, BLM Ingest performs baseband signal processing such as noise reduction, de-interlacing, scaling, and watermarking – both in-vision and unobtrusive. Optionally Digital Fingerprints can be captured from the baseband material during baseband pre-processing.

4

### Real-Time Baseband Quality Assurance

The BLM VTR Status Monitor plug-in monitors the VTRs throughout the ingest process. Any VT errors are logged against time-code and the file is marked for later manual inspection. The VTR Status Monitor plug-in ensures that VT errors are not persisted in the written files.

The ingest process system runs unattended, systematically working through the cassette tapes in the Flexicart tape bins until completion. The BLAM web interface provides monitoring information and prompts for action – typically to re-stock the Flexicart.

5

### Post-ingest file based quality assurance

Following ingest, automated file based Quality Assurance (QA) is undertaken to complement the linear real-time QA. The QA reports are logged in the BLAM against the asset and any errors which breach set thresholds will trigger a baseband visual inspection workflow using the BLM Baseband Player. Material which contains VT artefacts is marked for re-ingest or alternative file based restoration. Material which passes QA is certified as such and logged in the BLAM for onward distribution.

6

### Lossless clip preparation

Through the BLAM, using the browse file as a frame accurate reference, archivists may review ingested material to trim or join clips for preservation. Conserved clips will be cut and / or spliced from the master file without decoding to baseband so there is no degradation in quality. Unwanted material such as tape line up is marked for deletion. The workflow of ingesting an entire tape and trimming in the file domain ensures no un-catalogued content is lost and enables an operational model of rapid 'blind' tape ingest and catalogue 'at leisure' without compromise to quality.

7

### Content catalogue metadata enrichment

Archivists validate the essence against the library records and the catalogue metadata is enriched using the browse essence as a reference. The use of low bit-rate browse and the BLAM's built in webserver, BLAM enables a geographically distributed operation which greatly extends reach, and enables innovative operational models such as crowdsourcing for catalogue metadata enhancement. BLAM provisions for temporal data to be appended to material, meaning that searches can be shot or scene specific.

8

### Content exploitation: Reuse | Syndicate | Monetise

Content is digitised, catalogued and ready to be exploited. File based material and associated metadata may be pushed to a house asset management system, deep archive or directly to edit or transmission systems. For direct distribution and monetisation, BLM StoreFront is ideal. StoreFront enables content owners to realise the value of assets by providing a public-facing portal through which material can easily be searched, retrieved and purchased.

StoreFront is a white-label content publishing and point-of-sale platform, which provides a simple and highly automated system for content owners to showcase and monetise their media catalogue. Operationally, consumers can search for content, browse material and select clips, or sections of clips, for use in new production packages. Following a simple check-out process the material is automatically restored from the master content repository and delivered to the client's facility in the required format using BLM's video processing services. The BLM technology supports numerous revenue models for direct content syndication to media organisations.

## Operational questions? BLM answers

### Our tape archive has been untouched for years, another couple won't hurt, will it?

Even relatively modern cassette tape formats are showing signs of deterioration and many are well beyond their forecast life, consequently material is becoming irretrievably lost.

### We have tapes without any records; we don't even know what is on them. They are probably worthless.

Digitise them anyway. Digitise now and catalogue at leisure, unwanted material is easily deleted later and you may have high value assets within the collection.

### How long will it take?

That depends on the number of tapes, their condition, system size and staffing levels. As a guide 25,000 cassettes ingested using 2 Flexicarts and running at 85% utilisation will take 6-months. BLM has comprehensive time and cost calculators for bulk ingest projects allowing for detailed planning and predictable expenditure.

### Do BLM build complete, 'turn-key' systems?

Yes, BLM work with systems integrators globally to provide fully integrated systems including the provision of the standard IT infrastructure and, as necessary, refurbished Flexicarts and VTRs.

### Do BLM offer archive tape ingest as a managed service?

Yes, BLM work with regional operational partners to provide bulk tape digitisation as a service. These are typically facilitated as a 'pop-up' system deployed at your facility and can be fully operationally managed if required.

### We have a large amount of content that has already been digitised, but can only be played using a specific manufacturer's system.

This is a common problem; even open standard wrapper formats such as .mxf have a variety of proprietary implementations. BLM build automated workflows which exploit our Tailor product, which extracts the essence and re-multiplexes the content (without recompressing) into a genuinely open and reusable format.

### What file formats do you support?

All of them, yes all common and uncommon formats are supported as standard.

### How much does it cost?

Less than you'd think with Blue Lucy Media. BLM software runs on standard IT infrastructure dramatically reducing the capital costs for operators. Furthermore the BLM pay-as-you go and lease licence options allows costs to operational and incrementally spread over the period of operation.



## Keep the executives happy with BLM

C.E.O



*I am pleased that I finally addressed the tape based elephant in the vault and digitised the archive.*

*The online content catalogue built on BLM's StoreFront will deliver a revenue stream for many years to come with an extremely low, transaction based, operational cost.*

*The historically important archive material has been preserved for the future, a legacy of which I am proud.*

C.T.O



*BLM deliver the highest possible quality video assets, utilising lossless processing techniques.*

*Material and metadata is stored in entirely non-proprietary formats providing ultimate flexibility.*

*All the BLM software runs on standard IT infrastructure meaning I can create a unified hardware environment without forming a legacy of vendor lock-in.*

C.O.O



*The highly automated processes the BLM software provides means I can keep my operational costs low.*

*The BLAM allows the operational teams to be distributed and I can readily scale the workforce.*

*By digitising the archive, the tape vault space has been freed up for modern production operations.*

C.F.O



*BLMs lease and Pay-as-you-go licencing models means we can constrain our CAPEX costs and keep our OPEX costs low and predictable.*

*Digital fingerprinting and content watermarking ensures the assets are protected, safeguarding our on-going revenue.*

*With the BLM all-software solution, rather than procuring from multiple hardware vendors I can include the video processing platform in my general IT infrastructure purchases.*