

The World's Audio Visual Archives in Jeopardy!

Culture, history, financial value – the world's archived video and audio material represents assets of inestimable worth. Many organisations hold archives of analogue video tape on a variety of defunct formats, with those responsible for maintaining those assets now faced with a major decision, even though many don't realise it yet.

In today's information age, where large amounts of digital data can be conveniently accessed and utilised, it makes sense to protect and maximise the usage of an organisation's existing analogue archives. This means having a clear and definite strategy to migrate to the appropriate digital format/s.

Ever had your hand forced?

By migrating your analogue tape archives to a digital form, you'll be able to realise their true value and repackage, share and distribute to your hearts content, not to mention protect your assets well into the future. The bad news is...if you don't embark on a digital migration strategy now, the decision will ultimately be taken out of your hands all together...and soon.



If you have analogue archives stored safely away on magnetic tape, whether that be VHS, Umatic, Betacam etc. your assets, without exception, are on an unerring path to self destruction, one of the most significant causes of which is a process called "hydrolysis".

A Sticky Situation

Magnetic tape is made from clear polyester backing covered with a layer of magnetic particles. The particles are held in place with a binder or glue. Hydrolysis, also known as "Sticky Shed Syndrome", is where the glue breaks down over time. The result is that tapes become coated in a sticky adhesive, making playback extremely difficult. At its worst, the magnetic particles come away from the backing all together leaving two things, the clear backing tape and a pile of dust...

"Since magnetic tape is a physical object, and since all - yes ALL- physical objects deteriorate, magnetic tape will deteriorate regardless of what is done to it or with it."

Gerald D Gibson, Library of Congress

Of equal concern is the fact that even if your tapes are only in the early stages of degradation, it's imperative to have access to a well maintained playback device to access the recordings. Older formats are no longer supported by the manufacturers that made them and the skills and parts needed to maintain or repair these old machines are disappearing.

In fact there is more analogue archival footage in existence in the world today that can ever be played back by the remaining playback devices. Without fail, the more time that passes, the greater the impact will be.

If it can happen to NASA...

No entity, large or small is immune from these issues. A few years ago NASA lost up to 20% of the information carefully collected during the 1976 Viking mission to Mars due to it being trapped on a decaying magnetic tape format. NASA had to call mission specialists out of retirement to help the agency reconstruct what was left.

When you consider the massive amount of time and money that was spent to send the Viking spacecraft to Mars in the first place, the magnitude of this loss becomes evident.

The House Always Wins

Inaction is, in itself, a course of action, and like any gambler you must be prepared to accept the worst case scenario if you do nothing. In this situation it will ultimately be the complete irreparable loss of your analogue tape archives. The term, “The House Always Wins” is what it all comes down to. If you gamble long enough, it’s an inevitable conclusion.

Studies by the National Media Laboratory have determined that average-quality magnetic tape, kept at a constant room temperature, starts to become unreliable as a storage medium in as little as five years. If you can’t live with the outcome, you must take the steps to engineer an outcome that is acceptable.

Devise your digital migration strategy... now!

Don’t store and ignore, it’s imperative that your organisation has a clear and effective strategy on how to migrate your analogue archives to digital – a strategy that DOES NOT include DVD. That’s right, migrating your archive to DVD is not an advisable solution. DVD was only ever designed as a distribution medium and the fact that signals are optically recorded onto an exposed disc surface makes data vulnerable to damage.

Research has shown that professionally stamped discs do indeed have a good lifespan, when stored and handled correctly. However, the same results cannot be said when a disc is burnt using a commercially available DVD burner. Indications are that up to 50% of these DVDs may become unreadable within 4-10 years.

Taking the first step

Periodic migration of valuable content to the most appropriate digital file format is an absolute necessity to guarantee material longevity and access. The first step, being from analogue to digital, is definitely the biggest and the most significant. The good news is that once digitised in the correct file-based format today, migrating to subsequent digital technologies will be far easier into the future.

Today, effective automated migration solutions are available streamlining the entire process and bringing costs down to an affordable realm. Multiple output encoders are available that allow audio visual content to be migrated to a number of different formats simultaneously. This allows you to undergo a process once only, and simultaneously create preservation, production and distribution copies from a single replay of the master tape.

What legacy will you leave behind?

In years to come will your name be remembered as the one who turned the tide and rescued your organisation’s audio visual archives, or will they be lost forever while you stood back and did nothing?

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www.damsmart.com.au

Canberra: +61 2 6242 6456

Auckland: +64 9 441 2440

