

# The Safeguarding of the Audiovisual Heritage

Ethics, Principles and Preservation Strategy  
Handling and Storage of audiovisual documents

- Objective of the workshop
- Who the workshop is aimed at
- What kind of audiovisual documents are meant

## Ethics, Principles and Preservation Strategy

*Ethical Principles for Sound and Audiovisual Archives*: IASA Special Publication No. 6:  
<https://www.iasa-web.org/ethical-principles>

The guiding principles of this workshop can be summarised by the following statement:

*Preservation measures give us the opportunity to pass on as much information from our holdings to future generations as possible. It is the responsibility of an archive to assess the needs of its current users, and to anticipate the requirements of future users as far as possible, this of course, in harmony with the framework conditions of the archive and its contents.*

## THE TASK OF AUDIOVISUAL ARCHIVES

- Preservation of the optimal readability of the physical carrier
- Maintenance of the technological system required to access the information
- Provision to transfer the information to other sustainably accessible, file-based formats

## PRIMARY AND SECONDARY INFORMATION

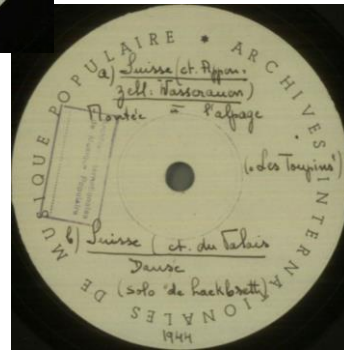
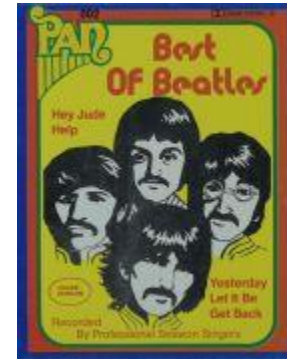
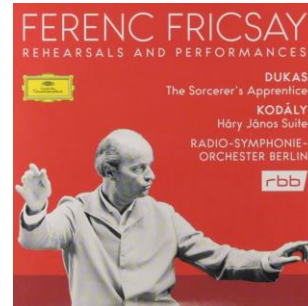
Any archival document consists of multiple forms of information:

- Two types of information, primary and secondary, together make up the audiovisual heritage document.
- Primary information concerns the content, the audiovisual event.
- Auxiliary or secondary information concerns the object itself, such as disc, cylinder, magnetic tape, video cassette, etc. It can therefore take a variety of forms.
- The importance of this information can vary according to the content and the type of support.

**Both primary and secondary information form part of an audiovisual document, whether carrier-based or file-based.**

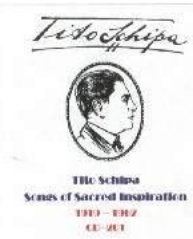


International Association of Sound and Audiovisual Archives



TITTO SCHIPA Songs of Sacred Inspiration SAC CD-50

1. Fiat Aegredere (Pavani)	1:00	1:00	1:00	1:00
2. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
3. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
4. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
5. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
6. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
7. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
8. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
9. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
10. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
11. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
12. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
13. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
14. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
15. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
16. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
17. Ave Maria (Pavani)	1:00	1:00	1:00	1:00
18. Ave Maria (Pavani)	1:00	1:00	1:00	1:00



## OBSOLESCENCE

- No audiovisual format, whether carrier-based or in the form of a file, will be playable indefinitely.
- All formats require a corresponding playback device, be it a record player, tape recorder, CD player or software in a computer environment.
- All formats are affected by obsolescence.

## OBSOLESCENCE

**A strategy should therefore focus on the dangers of obsolescence.**

The following measures should be taken:

- Careful storage of devices, spare parts, and other equipment.
- Preservation of service and operating manuals.
- Preservation of technical know-how within the institution or in co-operation with other institutions.
- A suitable digital archive must be provided for the preservation of digital files, which should also include regular migrations to newer formats or possibly emulations.



## THE INSTABILITY AND VULNERABILITY OF AUDIOVISUAL CARRIERS

- In contrast to paper documents, audiovisual documents have a shorter durability.
- Audiovisual carriers are generally more vulnerable to damage caused by poor handling, poorly maintained equipment or by poor storage.
- The risk of loss of information is higher with digital carriers due to the high density of data.

## **SAFEGUARDING THE INFORMATION**

By preservation of the carrier

- Storage in an appropriate environment
- Equipment used must meet the physical requirements of the carriers

By subsequent copying of the information

- Preservation in the long term can only be achieved by copying the contents to new carriers or systems
- Separation of primary and secondary information: question of authenticity

## TRANSFER TO A NEW FORMAT

- When transferring from old to new archive formats, the most exact possible copy should be aimed for.
- Subjective alterations must be avoided.
- Transferring the full dynamic range, frequency response and/or image resolution of the original is essential.
- Documentation of all parameters and procedures.

## PRIORITISATION

- Sooner or later, all sound and audiovisual documents will have to be transferred to file-based digital formats.
- Transfer process is time consuming and cost intensive.
- A prioritisation strategy is needed.
- Priority should be given to those documents that are at greatest risk.

## PRIORITISATION

Carriers likely to degrade due to inherent instability, age or improper handling may include:

- wax or celluloid cylinders
- nitrate film
- instantaneous audio discs of all types, especially “lacquer” discs
- acetate tapes
- acetate film showing signs of colour fading, unless stored frozen
- 1/2” EIAJ video tapes
- U-matic tapes
- recordable optical media (CD-R, DVD-R etc.)

## Digital archiving and data management

- Digital data must also be archived.
- A responsible preservation requires a digital archive.
- File-based content must be checked at regular intervals.
- Regular monitoring of data integrity is one of the central tasks of digital preservation routines.
- **Standards:**  
Open Archival Information System (OAIS) reference model (ISO 14721)  
and in documents on Trusted Digital Repositories (ISO 16363).

## Digital archiving and data management

- Management software, costs and possible solutions
- Knowledge to operate and maintain a digital archive
- Planning of storage space capacities
- Store two digital archive copies in different geographical locations
- User copies

# Handling and storage of audio and video carriers

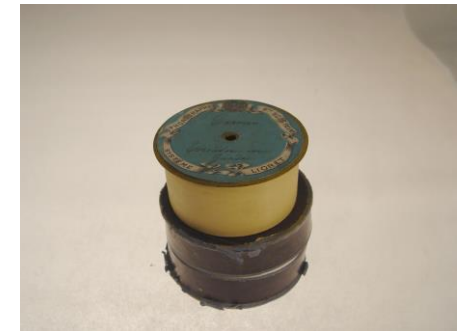


## Physical audiovisual media

### On analogue or digital carriers

- Tapes
- Discs (LPs, Gramophone records etc.)
- Video cassettes (of every format)
- Betacam / Digibeta
- DAT (Digital Audio Tape)
- CDs / DVDs, especially CD-R and DVD-R
- Films
- ...

**Mechanical carriers constitute the oldest, commonly used type of carrier used for recording and reproducing audio and later video.**



## Physical audiovisual media

### Original analogue or digital carriers

**Originals are not thrown away or destroyed,  
even if a digital copy has been made of them.**

### A further principle

## Archiving of physical media

### Correct storage



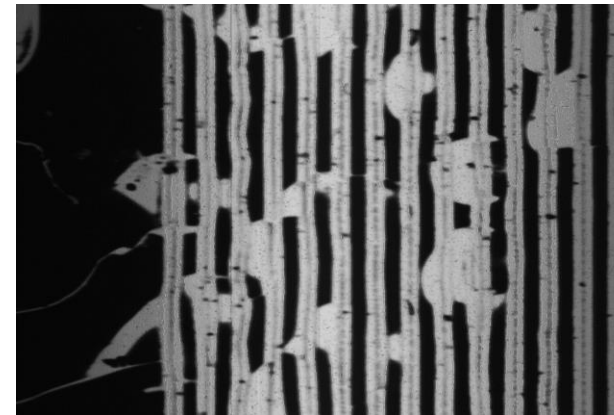
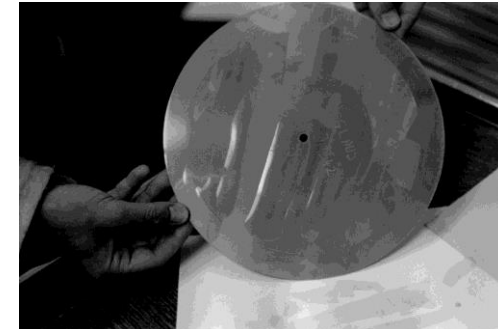
## Poor storage



## Results of poor storage : Tapes



## Results of poor storage: Direct cut discs



## Causes of deterioration

### 1. Environmental conditions:

- Heat
- Light
- Water
- Oxygen
- Atmospheric contaminants
- Static electricity

### 2. Mycosis, formation of mould

### 3. Incorrect handling



## Special case: Optical discs

CD / DVD / CD-R / DVD-R / CD-RW / DVD-RW / ...

- The protective lacquer on the reflective metal surface is so thin that it can be damaged very easily.
- Especially for CD-R / DVD-R and CD-RW / DVD-RW, problems arise from: oxidation, browning, heat, humidity, wear, incompatibility between materials.
- The quality of the blank disc plays a very important role.

## Archiving of physical media



### 1. Archiving conditions

- Furniture
- Packaging material
- Use of space
- Magnetic fields
- Cleanness

### 2. Safety and security

- Safety installation (alarm)
  - Intrusion
  - Fire (intervention concept)
  - Water (intervention concept)

### 3. Climate

- Temperature
- Humidity
- Air filter

## Recommendations

- The temperature, in the room where audiovisual carriers are stored, should never exceed 25°C. The relative humidity should never exceed 55%. Good values are 19°C or less and 40% RH.
- Do not stack audiovisual carriers horizontally or in contact with materials that have an irregular surface. Physical deformations can be limited by placing the material vertically and slightly compressed between each other.
- Do not touch the grooves of the disks, the recorded surface of tapes, and the reflecting surface of optical disks. After using, always put the carriers back into their protective covers. Avoid dropping them.

## Recommendations

- Avoid exposure of the audiovisual carriers to direct sunlight, to other UV rays and to magnetic fields, such as: household appliances, electrical motors, loudspeakers, etc.
- Store all the tapes (including cassettes) wound to the end. In this way:
  - 1) to reproduce a tape you are forced to rewind it completely, thus partly attenuating the copying effect;
  - 2) a tape wound to the beginning tends to produce a pre-echo that, at times, can be annoying (for analog recordings). If the tape is wound to the end, this pre-echo will become instead a post-echo, with a much more acceptable result.
- Wind and rewind the tapes (and cassettes) at least once a year to eliminate the forces created during archiving and to maintain the copying effect within acceptable levels.

## Do you also have the right and professional play-back device for all documents in your archive?



## Test your collections needs:

- Is your collection insured against theft, damage or disaster?
- Is the climate of your archives under control?
- Are your objects stored correctly?
- Do you have a preservation policy?
- Do you have consistent guidelines regarding the management?
- Do you have a catalogue or an inventory of your collection?
- Do you have in house expertise? Or
- Do you have the possibility to outsource some activities?
- Is my digital archive secure
- ???

## MAINTAINING THE KNOWLEDGE

- An audiovisual archive is an entire system necessary to preserve its documents and ensure access to them.
- A fundamental part of the system is specialised knowledge and experience.
- Acquire the necessary skills and knowledge and maintain them at a high level.
- Passing on expertise to future generations
- Be up to date with the latest scientific and technical knowledge in the field of audiovisual archiving.

## CO-OPERATION

- The greater part of the world's heritage of audiovisual documents reflecting cultural diversity of mankind is kept by small institutions.
- Co-operation and exchange of information will better prepare these smaller collections.
- Larger archives could take on some preservation activities for smaller institutions.
- Collaboration with others is one of the tasks of an audiovisual archive

**The comprehensive exchange of information between archives performing preservation activities is an ethical obligation.**



## **Don not make bricolage with your AV materials !**

**In case of doubt or for any additional information, or for simple curiosity, please do not hesitate to contact a competence centre (Audiovisual archives / Responsibles of sound and/or video collections ... ) or IASA.**



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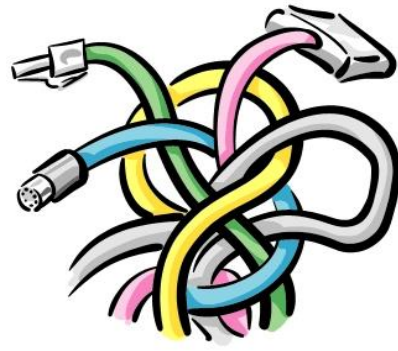
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of Music Libraries, Archives  
and Documentation Centres

<https://www.iasa-web.org/>

<https://www.iasa-web.org/tc03/ethics-principles-preservation-strategy>

<https://www.iasa-web.org/handling-storage-tc05>

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**ok ?**



**Yes !**

**Thank you**





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