

# Analogue and Digital Preservation in Difficult Times

Reto Kromer • AV Preservation by reto.ch

## Open-Source Tools and Resources for Audio-Visual Archives

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# Global Emergencies

- climate emergency
- war
- sanitation emergency

→ **slow down**

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# Climate Emergency

- embrace low-technology...  
... and low-energy solutions
- use less resources...  
... and recycle whenever possible

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# War (also fire, water, natural disasters etc.)

- protect yourself
- protect others
- protect your collections

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# Sanitation Emergency

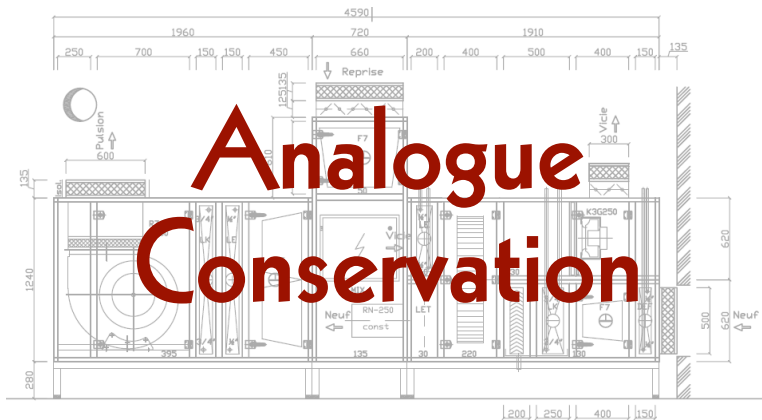
- hand hygiene
- physical distancing
- surgical masks to protect others (or FFP2 masks to protect yourself)
- stay home when feeling ill
- vaccination

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## Workflow

- prepare the source elements
- digitise the source elements
- digitally restore the files
- **conserve the source elements**
- **conserve the archive files**
- generate derivate files

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## Working Place

- manual rewinder
- ventilation
- illumination

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## Consumables

- protection masks
- nitrile (and cotton) gloves
- tissues
- solvents
- film cement

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## Infrastructure

- proper vaults with climate control

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## Active measures

Air conditioning system:

- refrigerate
- dehumidify
- filter

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## Air pollutant

- $\text{SO}_2 < 1 \mu\text{g}/\text{m}^3$
- $\text{NO}_x < 5 \mu\text{g}/\text{m}^3$
- $\text{O}_3 < 25 \mu\text{g}/\text{m}^3$

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## Outgassed acid

- $\text{CH}_3\text{COOH} < 1 \text{ ppm}$
- $\text{HNO}_3 < 1 \text{ ppm}$

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## Air flow

Outgassed acetic acid or nitric acid are heavy gases:

- air supply at the ceiling of one wall
- air exhaust at the bottom of the opposite wall
- air supply and air exhaust on the full length of the opposite longer walls

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## Passive measures

- location
- orientation
- exterior paint colour
- shadow
- insulation
- humidity barrier
- apertures

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# Digital Conservation

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## Equipment

- servers
- network
- storage
- ventilation (cooling)

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## Working Place

- software
- computer with at least one good monitor
- storage
- illumination
- chair

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## Equipment

- LTO desk or library
- software
- network

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## Working Place

- small computer
- software

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## Consumables

- LTO cartridges

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