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Open Source on the Rescue!

Reto Kromer • AV Preservation by reto.ch

21st SEAPAVAA Conference
Imagining an AV Archive of the Future
Manila, Philippines, 2017-04-06

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Summary

- imagining
- an audio-visual archive
- of the future

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	quick	longtime
important		
not important		

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Analogue [...] Digital

- [...]

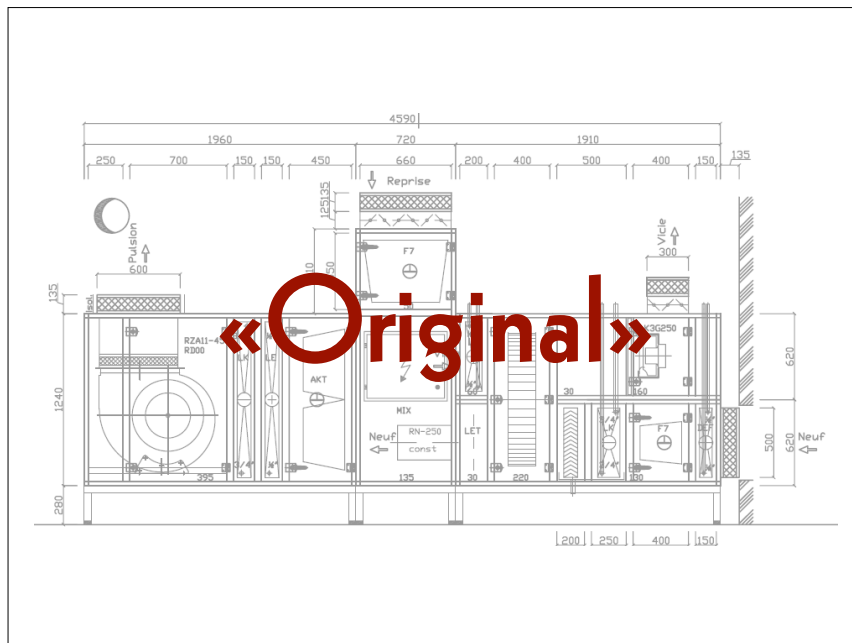
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Live in the real world

There is only one efficient way:

- keep the «originals»
- more prevention:
 - better insulation
 - more efficient air conditioning
- less handling of the «originals»
- make access copies

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Develop a strategy

1. list the ISO standard for each media type which is present in the collection
2. assess the environment inside each vault at least for one year
3. inspect the condition of the collection
4. analyse the results and find the weak link
5. improve the conservation

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Principle

In order to guarantee the conservation, one must know both the **condition** of the each media type **and** the **climate** in each storage vault:

- condition of the collection
- temperature and relative humidity

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Statistical method

The analyse of a randomly chosen subset of

164 items

of each type of material and in each storage vaults informs about the full collection with the precision of

80% ± 5%

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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 nitric acid or acetic acid are heavy gases:

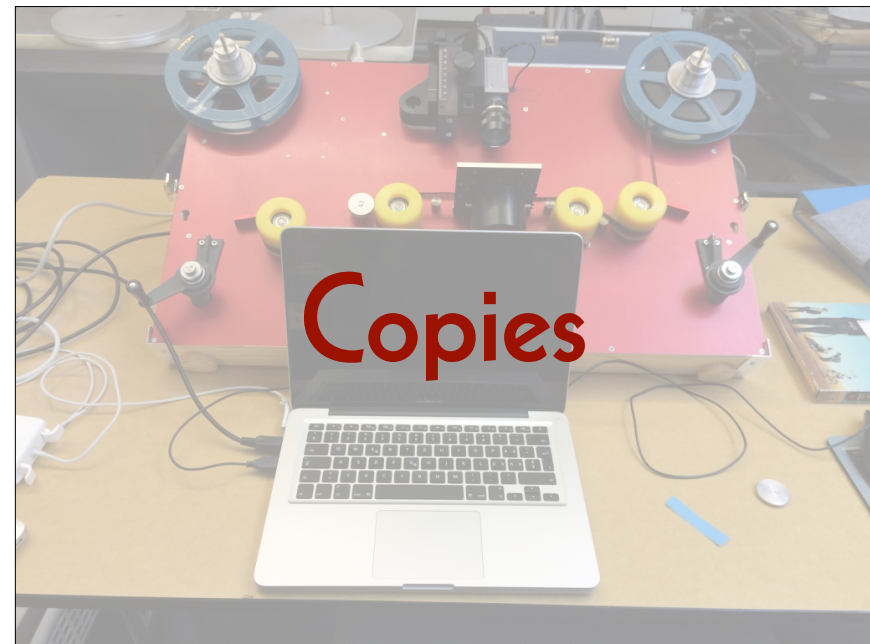
- air supply at the ceiling of one wall
- air exhaust at the bottom of the opposite wall
- air supply and air exhaust on the full length of the opposite longer walls

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Passive measures

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

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Open formats

- EMBL
- Matroska (MKV)
- FFV1
- FLAC

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**Indiana University
Media Digitization and Preservation Initiative (MDPI)**

White Paper:
Encoding and Wrapper Decisions and Implementation for
Video Preservation Master Files

Authored by:

Mike Casey, Director of Technical Operations, MDPI

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FFmpeg

ffmpeg, ffprobe, ffplay, ffmpegserver

- ffmpeg.org/
- avpres.net/FFmpeg/
- amiaopensource.github.io/ffmprovisr/

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MediaArea

MediaInfo

→ mediaarea.net/MediaInfo

MediaConch

→ mediaarea.net/MediaConch/

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BAVC

QCTools, qcli

→ bavc.org/preserve-media/preservation-tools

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AMIA Open Source

vrecord

→ github.com/amiaopensource/vrecord

audiorecorder

→ github.com/amiaopensource/audiorecorder

LTOpers

→ github.com/amiaopensource/ltopers

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