

Video: Identification & Risk Assessment

Howard Besser
 NYU Moving Image Archiving & Preservation Program
<http://besser.nyu.edu/howard>
<http://www.nyu.edu/tisch/preservation/>

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Video: Identification & Risk Assessment-

- Physical examination of carriers
- Physical Properties of Tape
- Handling Tapes
- Tape Storage
- For both Tape & Film
 - Macro Environment
 - Setting Priorities

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Physical examination of carriers

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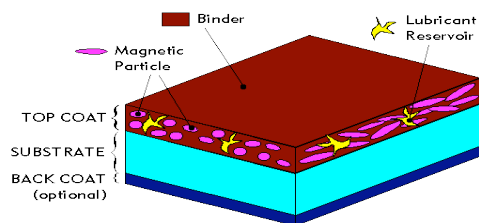
Physical Properties of Tape

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Structure of Tape

Van Bogart <http://www.cllir.org/pubs/reports/pub54>



- Binder—Functions as a carrier for the recording material & Bonds it to the substrate
- Substrate—Base material on which the recording material is coated (eg. an aluminum platter or a thin ribbon of polyester film)

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Tape Substrate

- Early tape used cellulose acetate
 - Moisture/hydrolysis
 - Vinegar syndrome
- More recent tapes are polyester terephthalate (PET) or polyethylene naphthalate (PEN)
 - Chemically stable
 - Resist hydrolysis and oxidation

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Magnetic Particles

- Store recorded information
- Change in magnetic properties can result in loss
 - ♦ Magnetic remanence - ability to retain a magnetic field
 - ♦ Coercivity - ability to resist demagnetization
 - ♦ Magnetic deterioration of the metal particulate and chromium dioxide materials

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Binder Layer

- Holds the magnetic particles to the base
- Where the problems are likely to occur
 - ♦ binder-base adhesion
 - ♦ oxide shedding
 - ♦ dropoff
 - ♦ hydrolysis
 - sticky shed
 - magnetic head clog
- Tape baking as one solution

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Video Cleaning Machine

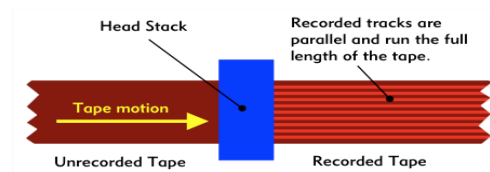


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Longitudinal Recording

Van Bogart <http://www.clir.org/pubs/reports/pub54>

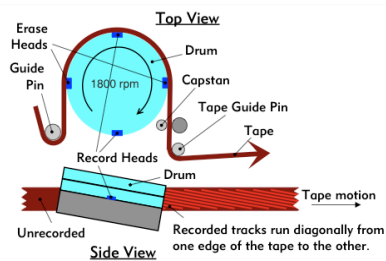


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Helical Scan Recording

Van Bogart <http://www.clir.org/pubs/reports/pub54>



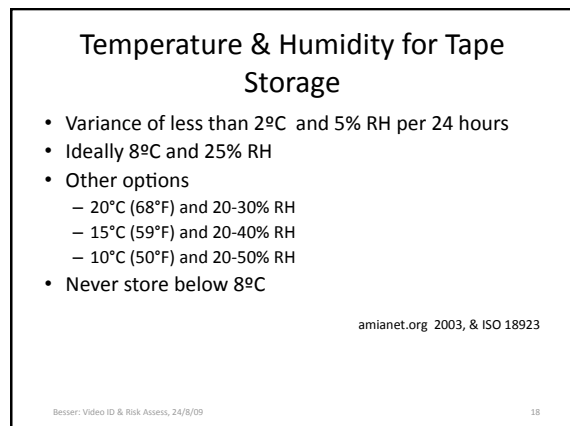
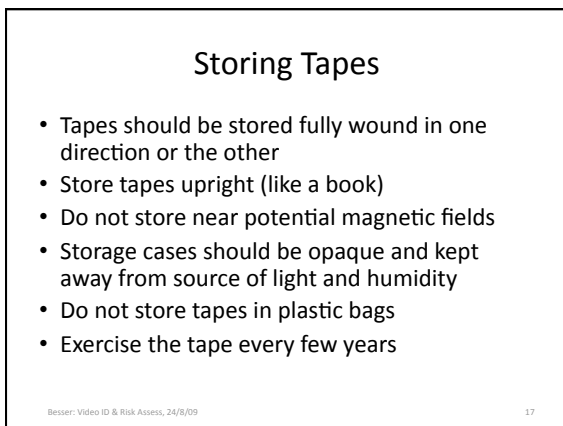
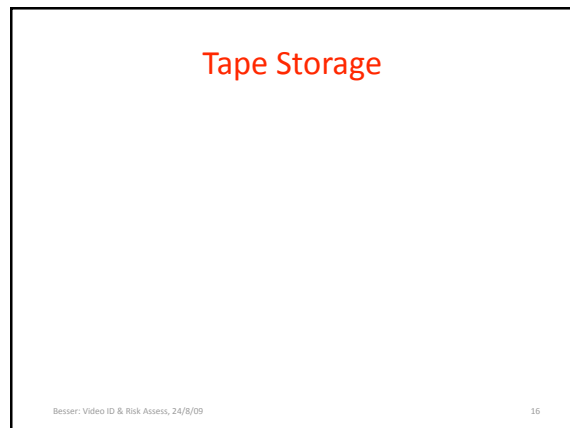
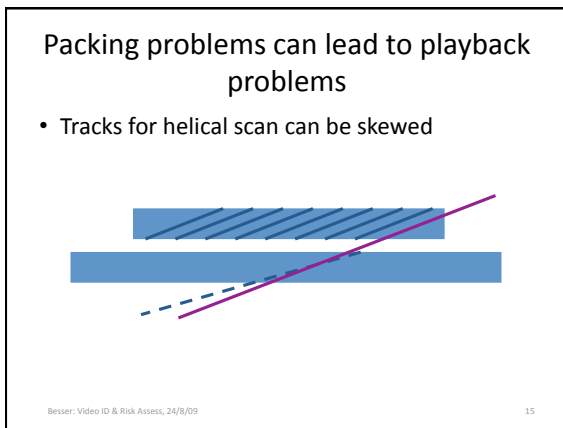
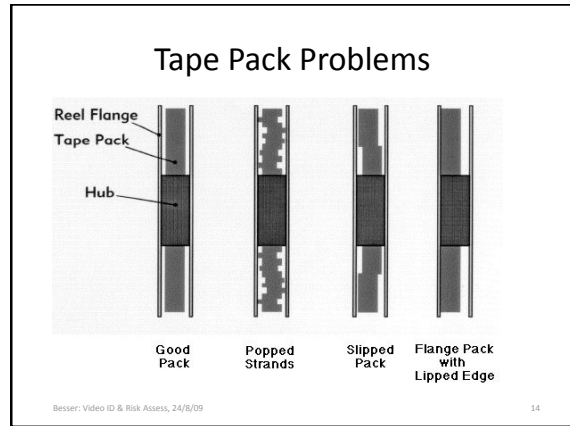
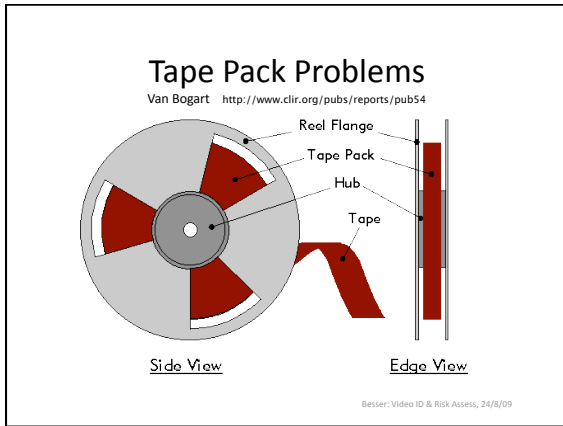
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Handling Tape

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VidiPax Video Preservation (Internship)



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For Both Film & Tape-

- Macro environment-
- Setting Priorities

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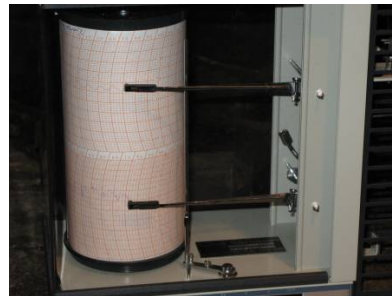
Monitor Temp/Humidity



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Thermohygrograph



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Hampton Collection (atmosphere cntrl)



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Academy-Atmosphere



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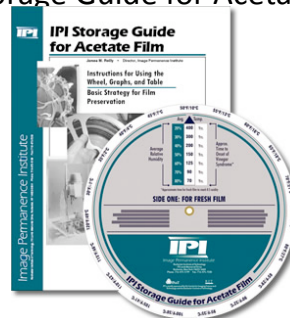
Macro Environment

- Importance of temperature & humidity control
- Monitoring the environment
 - dataloggers
 - Climas
 - less expensive solutions
- Controlling the environment
- Conservation survey assessments, periodic monitoring of items in the collection
- Decision-making on priorities and treatments

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IPI Storage Guide for Acetate Film



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IPI Preservation Index

temperature/humidity, Years until noticeable deterioration

% RH	Temperature C°						
	2°	7°	13°	18°	24°	29°	35°
20	1250	600	250	125	60	30	16
30	900	400	200	90	45	25	12
40	700	300	150 150	70	35	18	10
50	500	250	100	50	25	14	7
60	350	175	80	40	20	11	6
70	250	125	60	30	16	9	5
80	200	100	50	25	13	7	4

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Academy--vault staging



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Improving storage outside the Can

Jean-Louis Bigourdan, AMIA 1998

- lowering temperature and/or relative humidity can help reduce the rate of acidification in degrading film
- trying to remove acid within the can does not outweigh the benefits of low temperature and humidity
- the greatest improvements in chemical stability can be achieved with cold temperatures

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Setting priorities

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NYU University Archives Internship Project

Acid Detection results/autocatalytic point readings

University Archives Collections	Total # of items	0-1.0	% of 0-1.0	1.5-3.0	% of 1.5-3.0
University Archives (in total)	400	325	81%	75	19%
Audio Visual	107	82	77%	25	23%
Brademas Papers	75	75	100%	0	0%
Classics Dept. Tapes	101	100	99%	1	1%
Dept. of Athletics	14	4	29%	10	71%
External Affairs	2	2	100%	0	0%
Abby Weed Grey	37	37	100%	0	0%
Alice V. Keliber	10	10	100%	0	0%
Miscellaneous Films	45	6	13%	39	87%
Annette Weiner	9	9	100%	0	0%

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Setting Collection Priorities

- You collection will always need more time than you can give
- Triage--setting priorities

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Methodology for Setting Priorities (1/3)

Identify different groupings within your collection

- By sub-collection
- By age
- By where they've been stored
- By video format

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Methodology for Setting Priorities (2/3)

Survey a Random Sample in each grouping

- Physically inspect each of the random samples, looking for metal oxide, tape packing problems, breakage, edge damage, stretching, curling, housing damage, or other signs of deterioration
- [play each tape]

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Methodology for Setting Priorities (3/3)

Analyse the data you gathered

- Extrapolate from your sample to project how many total tapes in each category are likely to have each problem
- Combine this data with other information (relative value of each sub-collection, replace-ability of particular groups of tapes, how unique certain groups are, © issues with reformatting, special funding available for certain sub-groups)
- Set priorities based on the above

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Collection Assessment Tools

- New York University Visual and Playback Inspection Ratings System (ViPIRS): Tool for Evaluating Audiovisual Magnetic Media
<http://library.nyu.edu/preservation/movingimage/vipirshome.html>
- Columbia University Libraries: Audio/Moving Image Survey Database
<https://www1.columbia.edu/sec/cu/libraries/bts/preservation/projects.html>

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Film & Video: Identification & Risk Assessment

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- <http://besser.tsoa.nyu.edu/howard/Talks/>
- <http://www.nyu.edu/tisch/preservation/research/libraries/resources.html>
- <http://www.amianet.org/>
- <http://sunsite.berkeley.edu/Longevity/>
- <http://www.imagepermanenceinstitute.org/>
- <http://www.screensound.gov.au/screensound/screenso.nsf/>
- <http://www.iasa-web.org/tc04/>
- <http://www.digitalpreservation.gov/>
- <http://www.interpares.org>

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