

# Diving Deep

**Free and open source software tools for the quality control of AV archival materials**  
(as seen through the eyes of a Google Slides template and some clip art)

Kelly Haydon | April 29th, 2017 | Society of California Archivists Annual Meeting | PasadenaCA



# AGENDA

- 
- **Information (?)**
  - **Demonstrations (!)**



# FOSS



## Free and Open Source Software

The acronym is controversial, but let's not go there...[\[go here\]](#)

Just know (1) the source codes of these applications are freely available to copy, study, and change (2) FOSS is a movement that challenges proprietary business models by encouraging self-determination through community engagement .



# AV Archivists are REALLY into FOSS Development for Digital Video Analysis...



## MediaInfo

Displays technical information about media files (aspect ratio, frame size, bit rate, etc.)



## MediaConch

An implementation checker, policy checker, reporter, and fixer that targets preservation-level audiovisual files.



## DV Analyzer

A technical quality control and reporting tool that examines DV streams in order to report errors in the tape-to-file transfer process



## QCTools & qcli

A dynamic, stand-alone quality control tool for one-to-one digital video analysis. Qcli is the command line version of the tool.



## SignalServer

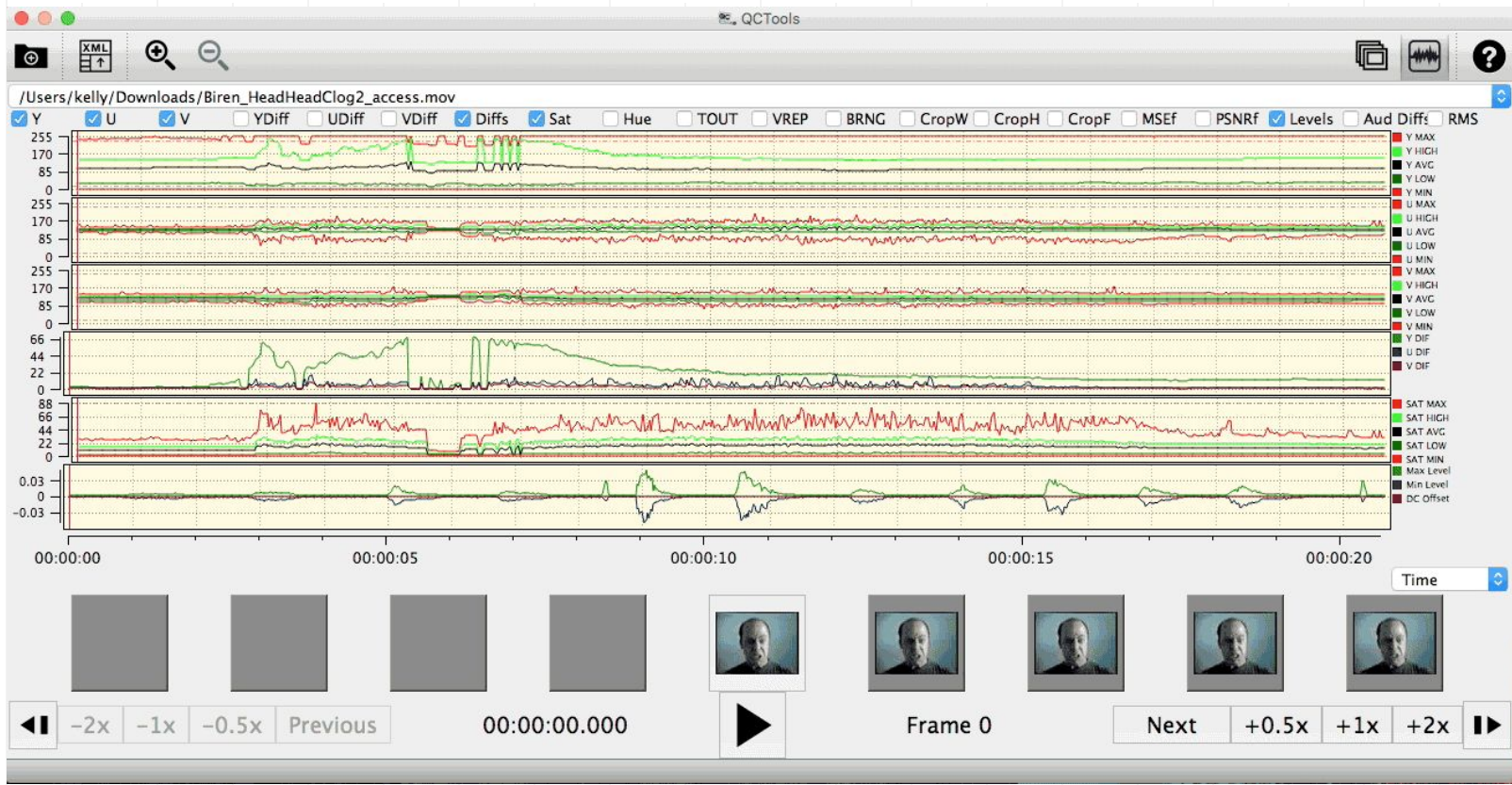
A web server application that collects data from QCTools reports for collection-level analysis of tape-to-file digitization projects.



## AV Artifact Atlas

An online, community built resource for identifying errors and anomalies in video digitization.



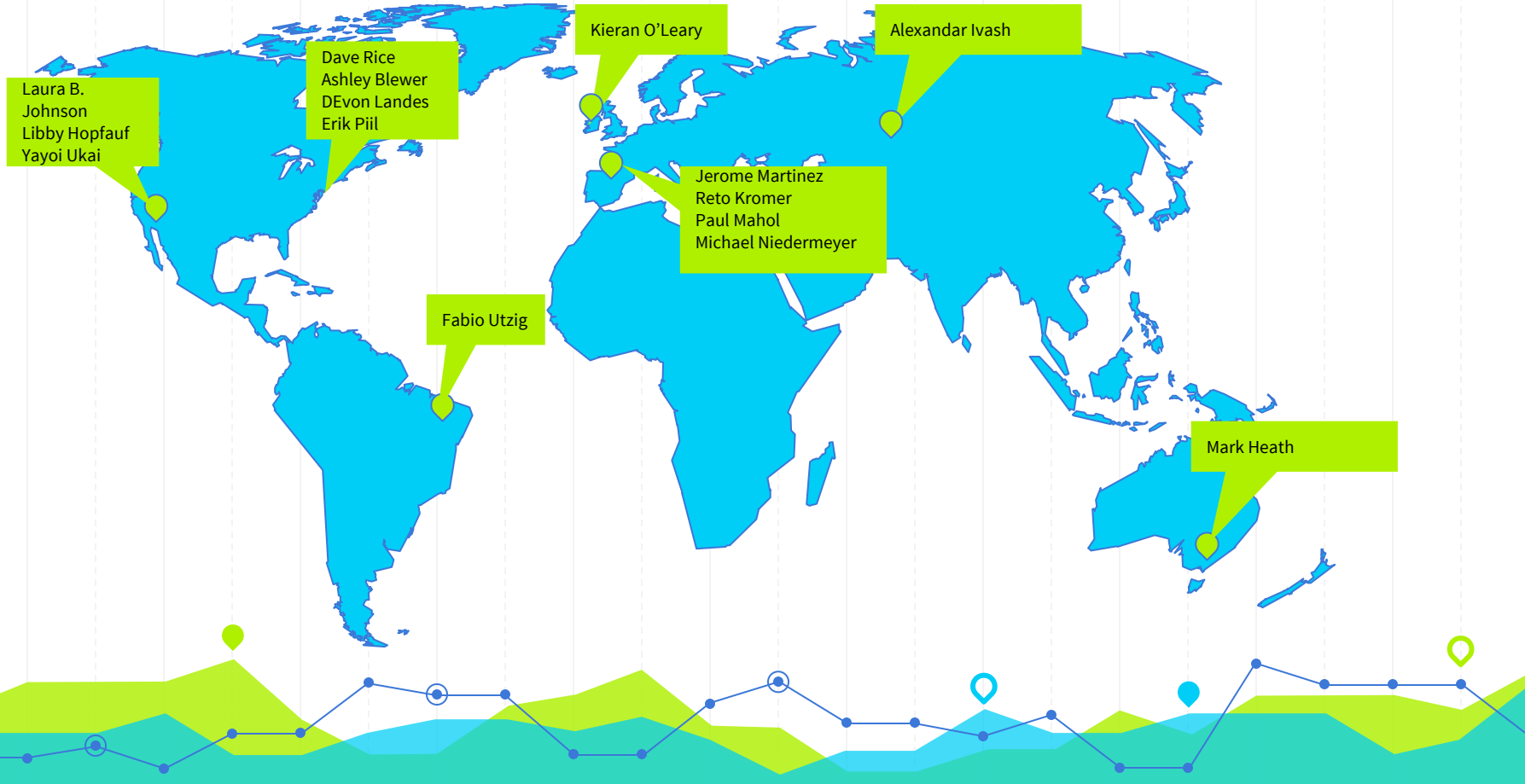


# AV Archivists are REALLY into FOSS Development for Digital Video Analysis...



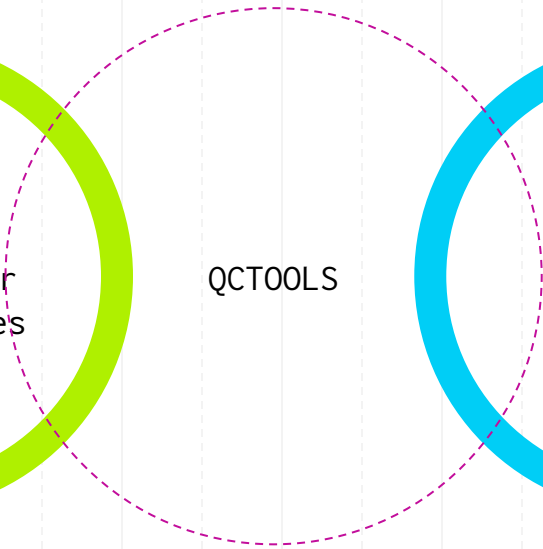
...and they all know Dave Rice @dericed

# QCTools Developers (A Sampling)

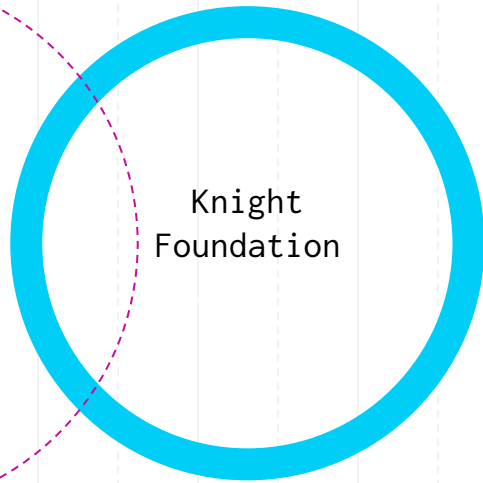




National  
Endowment for  
the Humanities

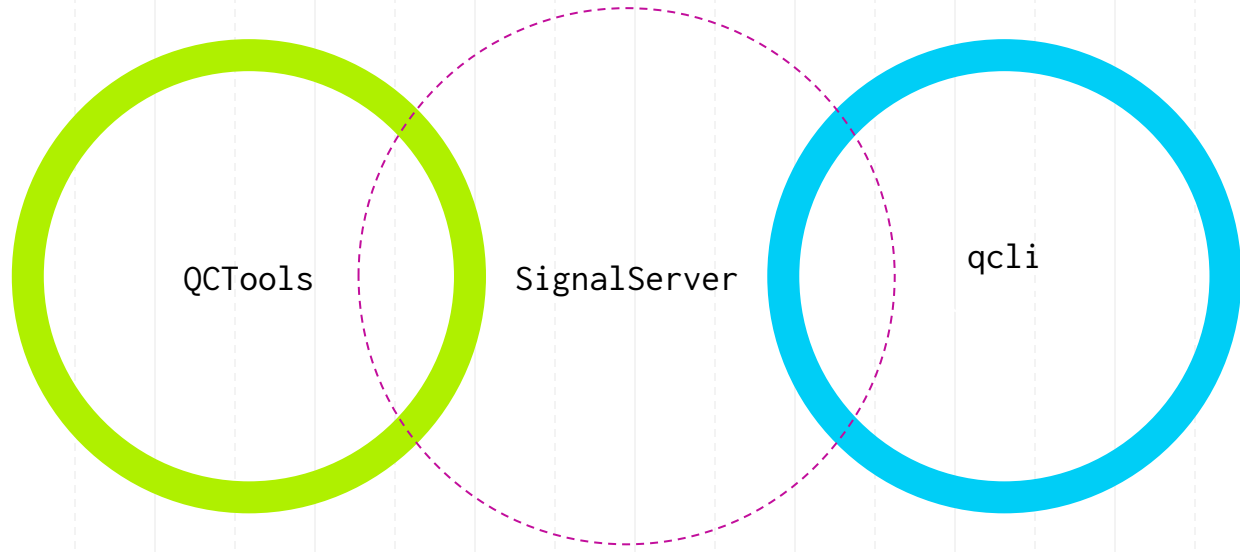


QCTOOLS



Knight  
Foundation





# QCTools Tester Workshops



2014



2017



# DEMONSTRATION

## The Scenario

You have sent two VHS tapes and one Mini-DV tape to a vendor to be digitized. They were sent back to you on a hard drive looking mostly okay.

¯\\_(\ツ)\\_/¯

But little do you know...





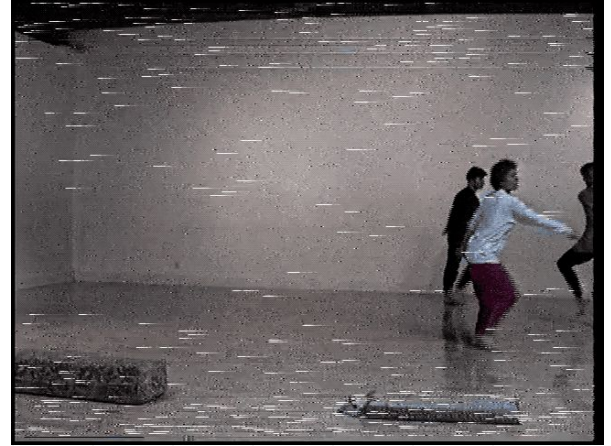
# There are Errors!



VHS  
Processing Error



Mini-DV  
Tape Damage



VHS  
Head Clog



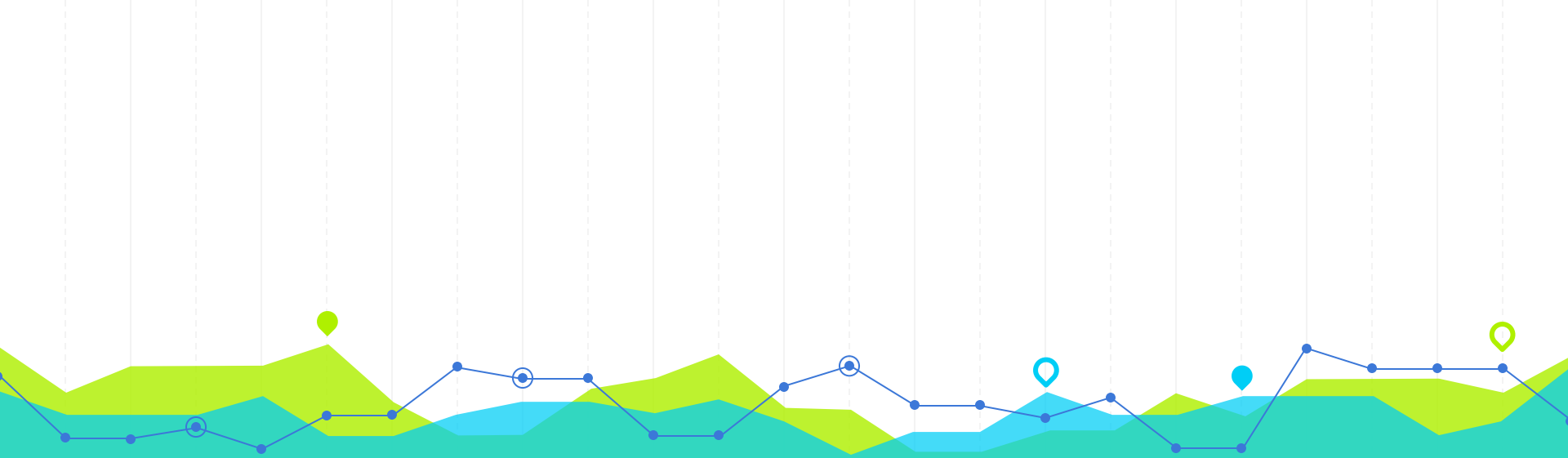


# DEMONSTRATION

## And How Might We Find Them?

By adding a few FOSS tools to your workflow you can find either visual errors, or errors in the technical metadata

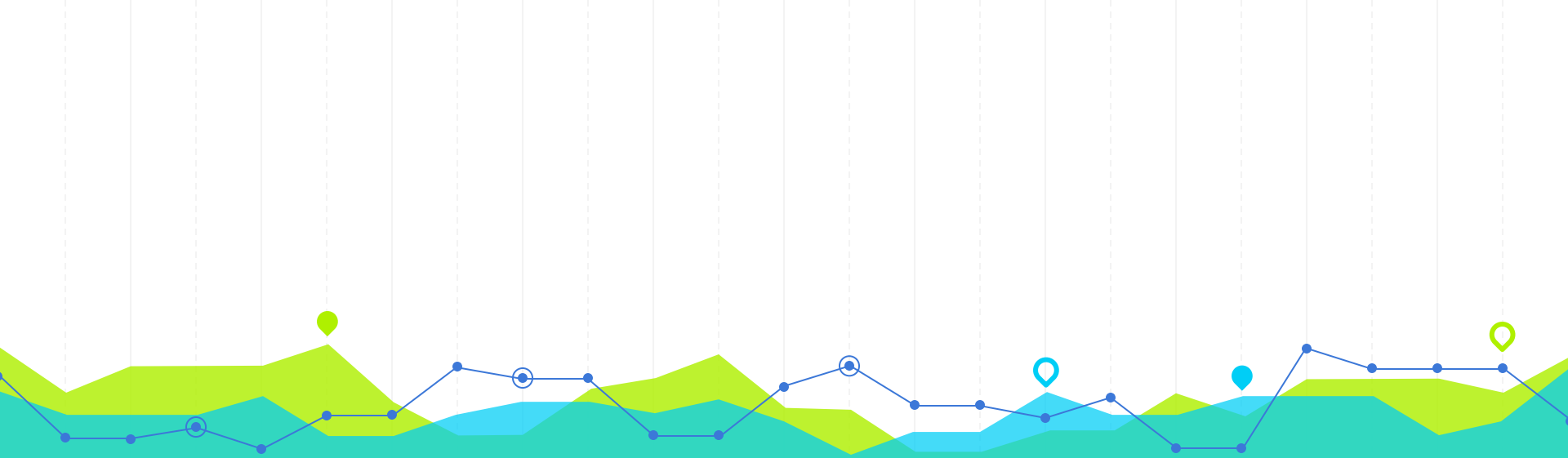




# MediaConch

# 1

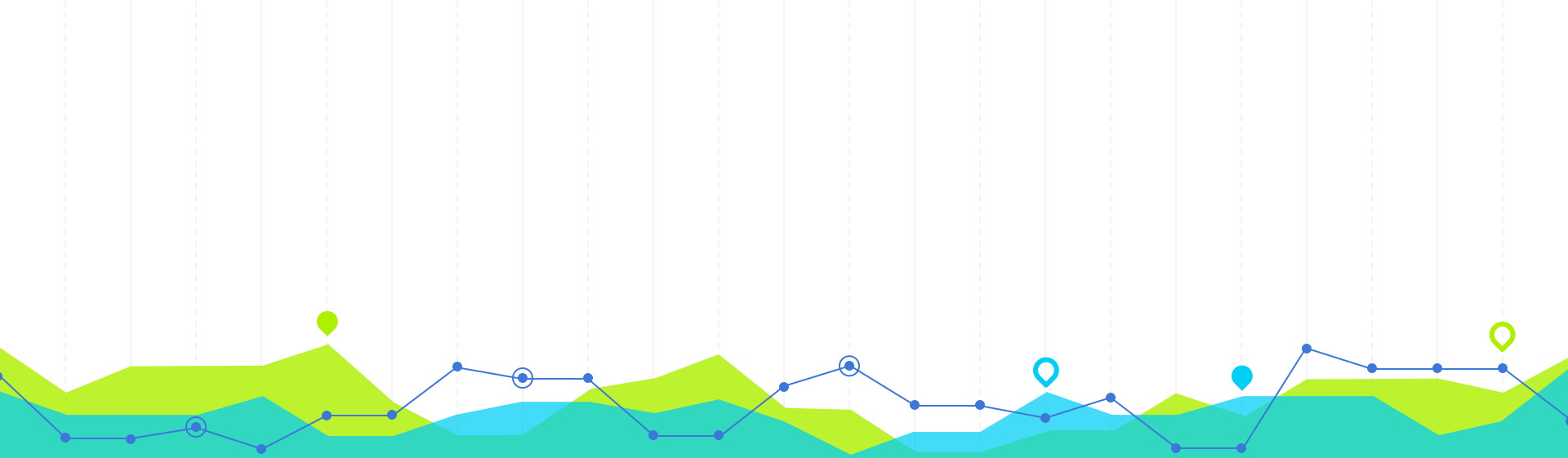
Conformance checker for preservation file formats | Developed by MediaArea.Net for the PREFORMA project



# DV Analyzer

# 2

Examines DV streams for errors | Developed by David Rice for AudioVisual Preservation Solutions

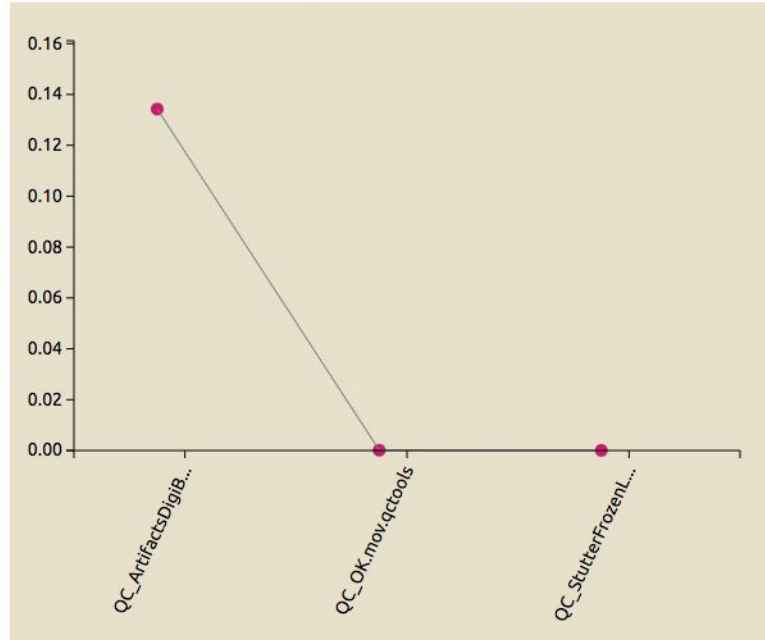


QCTools

3

# SignalServer is Coming

Filter Name : BRNG Operation: average



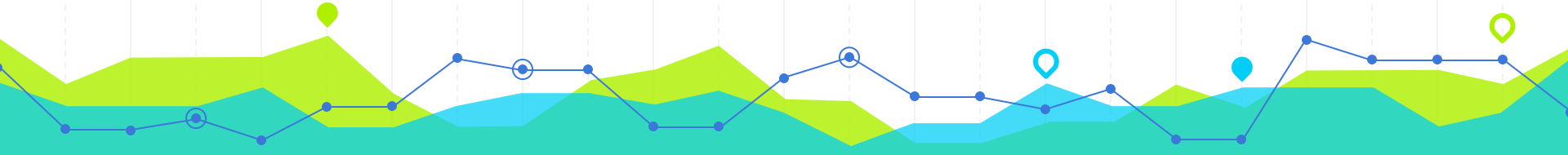


*QCTools [and other free and open source quality control tools] serves an important communicative function, one that transcends institutional boundaries. - Ben Turkus, “Drop Video Files Here”*





*QCTools allows me to spend more time with my girlfriend - Anonymous*



# THANKS!

## Any questions?

You can find me at

@bavcpreserve / kelly@bavc.org









## 50 boxes

- Identify complex objects
- Separate complex objects with yellow paper
- Add metadata
- Give to student worker for digitization

# Digitization station student worker operated Fujitsu fi-6400 & Adobe Bridge





Christopher Commission

File Edit View Insert Format Data Tools Add-ons Help Last edit was 2 days ago

Sort sequence

	A	B	C	D	E	F	G	H	I	J	K	L
1	Sort sequence	Level	Series	Series description	Subseries	File	File description	Date	Box	Folder	Item Number	Sample filename or directory
340	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: John W. Spiegel, Esq. of Munger, Tolles & Olson, cc: Nancy P. Mc	May 31, 1991	19	12	56	indep-box19-12-56
341	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: Louise A. La Mothe, Esq. of Irell & Manella, cc: John W. Spiegel, E	May 31, 1991	19	12	57	indep-box19-12-57
342	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: John W. Spiegel, Esq. of Munger, Tolles & Olson, cc: Nancy P. M	May 31, 1991	19	12	58	indep-box19-12-58
343	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: John W. Spiegel, Esq. of Munger, Tolles & Olson, cc: Nancy P. M	May 31, 1991	19	12	59	indep-box19-12-59
344	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: Louise A. La Mothe, Esq. of Irell & Manella, cc: John W. Spiegel, E	May 31, 1991	19	12	60	indep-box19-12-60
345	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Independent Commission on the Los Angeles Police Department letter - to: Mr. William M. Rathburn, C	May 31, 1991	19	12	61	indep-box19-12-61
346	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Independent Commission on the Los Angeles Police Department letter - to: Patrolman Ann Clark of th	May 31, 1991	19	12	62	indep-box19-12-62
347	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Independent Commission on the Los Angeles Police Department letter - to: Detective Henderson Cooper	May 31, 1991	19	12	63	indep-box19-12-63
348	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: Warren Christopher, Esq. of O'Melveny & Myers; from: Thomas E.	May 31, 1991	19	12	64	indep-box19-12-64
349	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: Bert H. Deixler, Esq. of McCambridge, Deixler & Marmaro, cc: Joh	May 31, 1991	19	12	65	indep-box19-12-65
350	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Gibson, Dunn & Crutcher letter - to: Mr. Roy A. Anderson of Leibel & Corporation, cc: Warren Christo	June 1, 1991	19	12	66	indep-box19-12-66
351	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Irell & Manella inter-office memo - to: I&M team* (LaMotte, Boston, Huffman, Savoldelli, Silverman, J	June 3, 1991	19	12	67	indep-box19-12-67
352	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Letter - to: David Huebner of Irell & Manella; from: Patrick T. Maher	May 31, 1991	19	12	68	indep-box19-12-68
353	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Memo - to: Lawrence B. Gottlieb, Esq., cc: John W. Spiegel, Esq.; from: Thomas E. Holliday; re: Indepen	June 3, 1991	19	12	69	indep-box19-12-69
354	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Memo - to: John W. Spiegel, Esq., cc: Raymond C. Fisher, Esq.; from: Thomas E. Holliday; re: Independent	June 3, 1991	19	12	70	indep-box19-12-70
355	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Memo - to: Patricia H. Benson, Esq., Terry W. Bird, Esq., Robert L. Corbin, Esq., Burt H. Deixler, Esq., J	June 3, 1991	19	12	71	indep-box19-12-71
356	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Mitchell, Silberberg & Knupp fax cover sheet - to: Tom Holliday of Gibson, Dunn & Crutcher; from: Ro	June 3, 1991	19	12	72	indep-box19-12-72
357	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Mitchell, Silberberg & Knupp interoffice memo - to: Tom Holliday, cc: John Spiegel, Abby Ullman; from	June 3, 1991	19	12	73	indep-box19-12-73
358	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Independent Commission on the Los Angeles Police Department fax cover sheet - to: Tom Holliday of G	June 3, 1991	19	12	74	indep-box19-12-74
359	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Independent Commission on the Los Angeles Police Department memo - to: All deputy general counsel J	June 3, 1991	19	12	75	indep-box19-12-75
360	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	O'Melveny & Myers fax cover sheet - to: Holliday; from: Gil Ray	June 3, 1991	19	12	76	indep-box19-12-76
361	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Memo - to: Commissioners and staff; from: Gil Ray; re: Security	June 3, 1991	19	12	77	indep-box19-12-77
362	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	List of names and addresses		19	12	78	indep-box19-12-78
363	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Memo - to: file; from: Thomas E. Holliday; re: Commission testimony of Detective I Henderson Cooper	June 4, 1991	19	12	79	indep-box19-12-79
364	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Memo - to: files; from: Thomas E. Holliday; re: Commission testimony of Patrolman III Ann Clark	June 4, 1991	19	12	80	indep-box19-12-80
365	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Munger, Tolles & Olson fax cover sheet - to: Thomas E. Holliday, Esq. of Gibson, Dunn & Crutcher; fro	June 4, 1991	19	12	81	indep-box19-12-81
366	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Independent Commission on the Los Angeles Police Department memo - to: Members of the Independen	June 4, 1991	19	12	82	indep-box19-12-82
367	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Distribution list		19	12	83	indep-box19-12-83
368	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	DRAFT - June meetings of the Independent Commission	June 4, 1991	19	12	84	indep-box19-12-84
369	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Munger, Tolles & Olson fax cover sheet - to: Thomas E. Holliday, Esq. of Gibson, Dunn & Crutcher; fro	June 4, 1991	19	12	85	indep-box19-12-85
370	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Memo - to: John W. Spiegel, Esq., cc: Raymond C. Fisher, Esq.; from: Thomas E. Holliday; re: Independent	June 3, 1991	19	12	86	indep-box19-12-86
371	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Irell & Manella letter - to: Ms. Lucy Dewell of Gibson, Dunn & Crutcher, cc: Louise A. LaMotte, Esq.; J	June 4, 1991	19	12	87	indep-box19-12-87
372	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Irell & Manella letter - to: Robert L. Corbin, Esq. of Sharenow & Corbin, bcc: Louise LaMotte, Esq., Jul	June 5, 1991	19	12	88	indep-box19-12-88
373	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Bryan, Cave, McPeeters & McRoberts memo - to: Thomas E. Holliday, Esq.; from: Percy Anderson, Es	June 5, 1991	19	12	89	indep-box19-12-89
374	346	file	Gibson, Dunn & Crutcher	The staff of Gibson, Dunn & Crutcher coo		Correspondence - Volume II	Miles & Nolan letter - to: Brian O'Neill, Esq. of O'Neill & Lynch; cc: Douglas Dalton, Esq., Mark O. H	June 5, 1991	19	12	90	indep-box19-12-90

From EAD ▾ Box 01 ▾ Box 02 ▾ Box 03 ▾ Box 04 ▾ Box 05 ▾ Box 06 ▾ Box 07 ▾ Box 08 ▾ Box 9 ▾ Box 10 ▾ Box 13 ▾ Box 14 ▾ Box 15 ▾ Box 16 ▾ Box 17 ▾ Box 18 ▾

Explore

Metadata from finding aid → box level information → folder level information → file level information... breaking apart folders into complex objects and describing those objects.



DVCAM

FinalCut

VHS





AM 12:53:55



# FOR SALE #7T

CHIMP

&

DALE

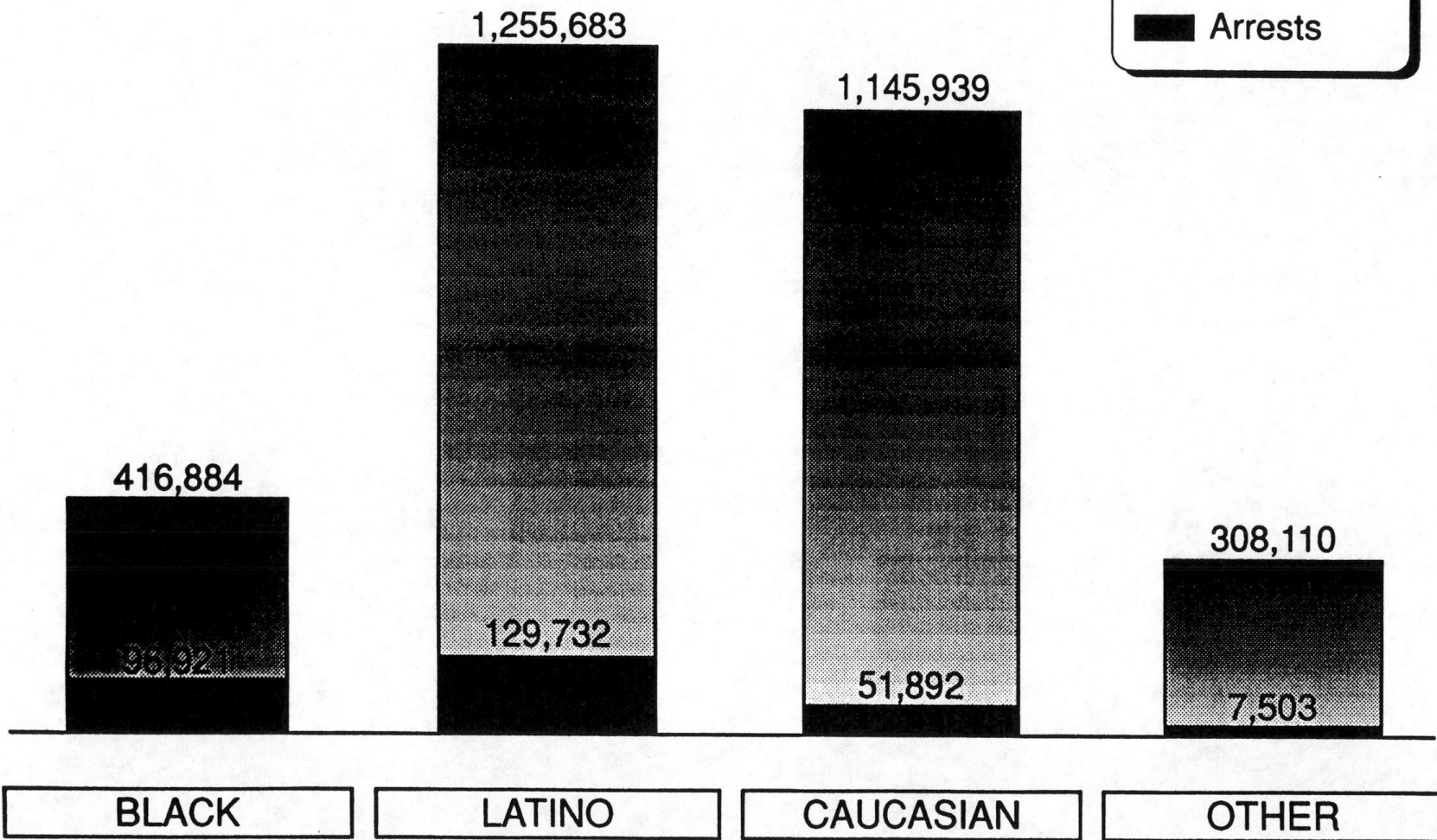
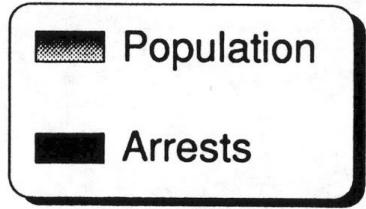


'CHIMP', A SIX YEAR OLD MALE ORANGUTAN, &  
HIS TWIN SISTER 'DALE' WERE RECENTLY  
ORPHANED WHEN BOTH THEIR PARENTS WERE  
TRAGICLY FED CYANIDE LACED BANANA'S.  
HAVE A HEART AND ADOPT THESE TWO  
LOVABLE 'APES... IT'LL ONLY COST YOU  
PEANUTS A DAY TO FEED THESE CUTIES.

Investigation of the Glendale Police Department's hiring and employment practices as they pertain to racial and ethnic minorities (vol. ii). Submitted by Ochoa & Sillas, Jan. 1988.

# CITY-WIDE POPULATION AND ARRESTS By Descent

DRAFT  
FOR DISCUSSION  
PURPOSES ONLY



BLACK

LATINO

CAUCASIAN

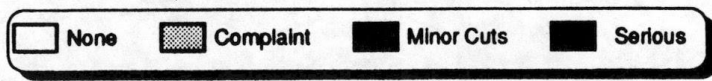
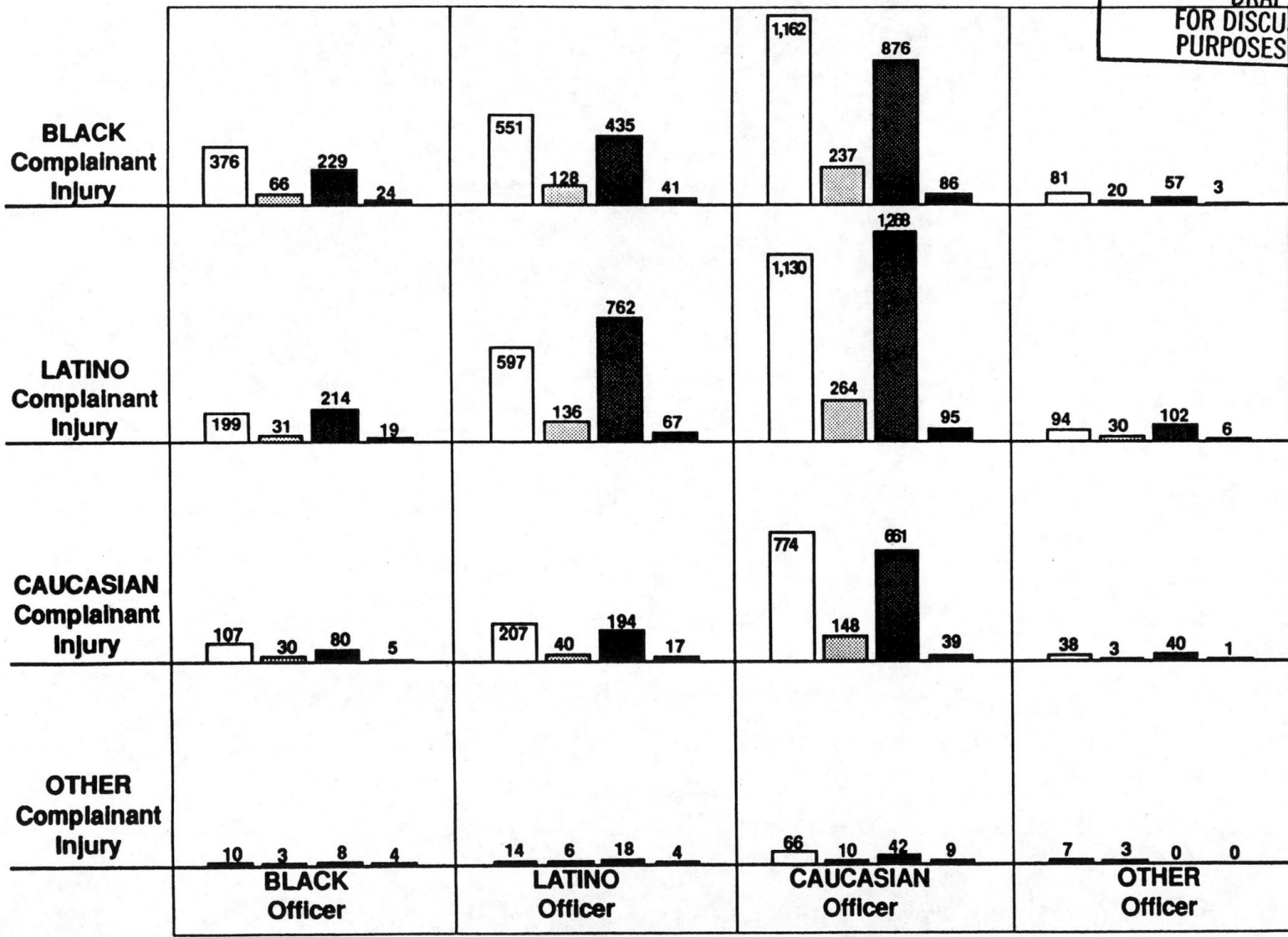
OTHER

SOURCE: 1990 Preliminary Census



# NUMBER OF OFFICERS ON UOF REPORTS AND DISTRIBUTION OF COMPLAINANT INJURY BY DESCENT

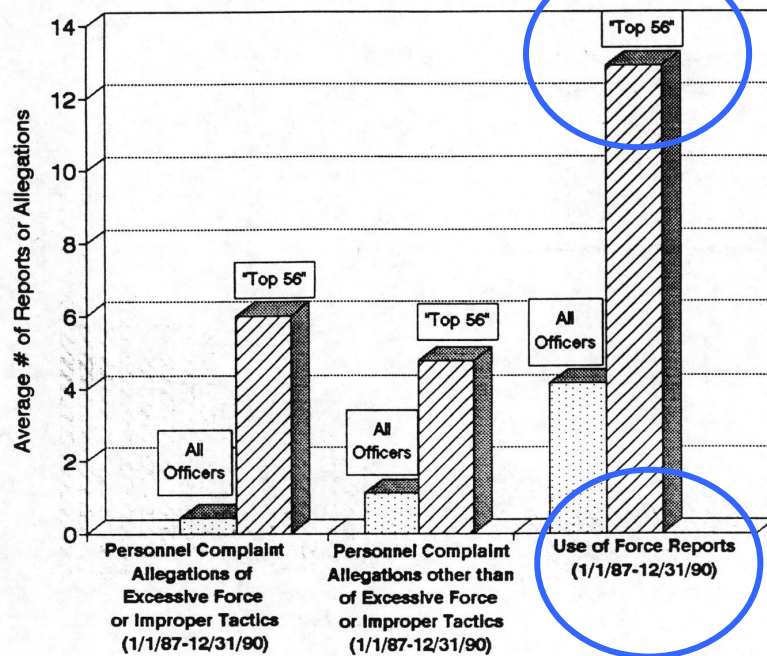
DRAFT FOR DISCUSSION PURPOSES ONLY



## Comparison of "Top 56" Officers\* Receiving Force Complaints with All Officers\*\* Involved in Use of Force Database

\* All Officers identified in a Use of Force Report as involved in a Use of Force (1/1/87-12/31/90)

\*\* All Officers with 4 or more Allegations in Personnel Complaints (1/1/87-12/31/90)



Source: L.A.P.D. Personnel Complaint and Use of Force Databases.

## OFFICER INFORMATION

(For officers with badge #'s 20446, 21667, 23678, 25440, 24883)

	<u>Officer Information</u>			<u>Number of</u>	<u>Percentile</u>
	<u>Badge</u>	<u>Sex</u>	<u>Descent</u>	<u>Reports</u>	
1.	[REDACTED]	M	C	12	10
2.	[REDACTED]	M	C	3	50
3.	[REDACTED]	M	C	10	10
4.	[REDACTED]	M	C	12	10
5.	[REDACTED]	M	C	19	10

JUNE 9, 1991

# SUNDAY

## Daily News

SERVING THE SAN FERNANDO VALLEY NEIGHBORHOODS

# The record against LAPD

254 officers named in 3 or more excessive-force cases

### Juries, attorneys find fault where department finds none

By Beth Barrett  
and David Parrish  
Daily News Staff Writers

In a November brutality case against the Los Angeles Police Department that cost taxpayers \$177,500, an LAPD division commander said his officers acted like a "lynch mob," and called such conduct intolerable.

However, despite the com-

mander's assessment of his own men and the city attorney's acknowledgment that a jury might award much more money because the victim was blinded in one eye, the Police Department's investigation found no wrongdoing by its officers.

That was one of 10 excessive-force cases — involving 2

See SETTLE / Pg. 16

Barrett, B., & Parrish, D. (1991, June 9). The record against LAPD: 254 officers named in 3 or more excessive-force cases. *Sunday Daily News*.

SERIAL #: 24917  
IA#: 88-1318

OFFICERS S/R: Male/Hispanic  
COMPLAINANT: Male/Hispanic  
NAME: Anthony Lopez  
ADDRESS: 8987 Marcourt  
Southgate, CA  
TEL. #: 567-0854

DATE OF INCIDENT: September 5, 1988  
DATE OF DISPOSITION: September 22, 1985  
PENALTY: 7 days suspension

WAS PENALTY CHANGED: Remained the same. Chief Gates signed off for 7 days suspension on October 19, 1988

BY WHOM/WHEN:

RANK AT TIME OF INCIDENT: PO2  
RANK AT TIME OF DISPOSITION: PO2  
RANK TODAY: PO2  
DIVISION AT TIME OF INCIDENT: Hollenbeck. There was no chase involved.

NATURE OF INCIDENT: The following is the nature of the incident. The type of complaint is discourtesy/improper tactics on two counts and they were sustained. Complainant Nancy Lopez alleged that police officer 2 Juan Gomez on or about September 5, 1988, 1830 hours, directed a ~~serious~~ remark to him while being processed to Hollenbeck station to wit "you lying asshole." Lopez further alleged that Gomez walked up to him while he handcuffed and seated on a detention bench, placed his buttocks within 1 foot of Lopez's face and deliberately flatulated. Mora, an independent witness, substantiated Lopez and ~~reputed Lopez's version of the incident.~~ Both these counts were sustained. The Board of ~~Right~~ *Right* found the officer guilty of counts 1 and 2 and also ~~described~~ a 7 day suspension. In the personnel files there ~~are~~ *was* no mention of the incident in the evaluation forms. The officer transferred to the Rampart Division after March 1, 1990. *recommended*

PERSONNEL COMMENTS:

TRANSFERRED: *Rampart*  
WHERE: *3-1-90*



SERIAL # 22658  
IA # 840303

OFFICER (S/R): M/H  
COMPLAINANT (S/R): M/C

DATE OF INCIDENT: 3-24-84  
DATE OF DISPOSITION: 6-12-84  
PENALTY: ADMONISHMENT

RANK AT TIME OF INCIDENT: P.O.II  
RANK AT DISPOSITION: (P.O.II - ~~XXXXXXXXXX~~)  
RANK TODAY: POLICE SGT I  
(12/31/89)

(P.O.II - 4/12/82)  
(P.O.II - 4/11/88)

DIVISION AT TIME OF INCIDENT: PACIFIC/FSD CHASE: N, F, V.

NATURE OF INCIDENT: IA-EXCESSIVE FORCE  
ALLEGATION - EXCESSIVE FORCE - SUSTAINED

COMPLAINANT REPORTED THAT OFFICER UNNECESSARILY HIT HIM WITH A BATON 4 OR 5 TIMES AND KICKED HIM WHILE HE WAS ON THE GROUND, WHILE ANOTHER UNKNOWN OFFICER BEAT HIM ON HIS BACK WITH A BATON. OFFICER FAILED TO DOCUMENT AN ALTERCATION IN ARREST REPORT

PERSONNEL COMMENTS: (DATES, NATURE)  
IN THE COMPLAINT IT WAS RECOMMENDED THAT NEGLECT OF DUTY AGAINST OFFICER BE SUSTAINED.

NO MENTION IN EVALUATION

TRANSFERRED: OWB CRASH  
WHEN: EVALUATION REPORT SHOWS 10-13-85

9-1-<sup>81</sup>~~88~~ / 2-28-<sup>82</sup>~~88~~ EVALUATION MISSING  
3-1-87 / 2-28-88 EVALUATIONS MISSING  
9-1-89 / 12-31-89 NO EVALUATION IN FILE



These are the thoughts that set fire to your city, Hollywood, 1993. Alley at Melrose Avenue and North La Brea Avenue, Hollywood. Phantom Street Artist aka Joey Krebs. Photograph by Robin Dunitz. *USC Digital Library.*





## Jet Propulsion Laboratory Archives

### Saving Old Media for the Future: Issues in Image Preservation and Access

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#### Photo Preservation Project

Library, Archives, and Records Section

Julie Cooper, Archivist

Camille Mathieu, Part-time Archivist

Society of California Archivists

Annual General Meeting

April 29, 2017

# JPL

Jet Propulsion Laboratory  
California Institute of Technology

# Photo Collections

1940 to 1970s/80s

Estimated 350,000 images



Negatives

Acetate

4x5

8x10

120 (6x6 cm)

35mm

B&W and Color

Some taped to crop

Proof prints

Kraft paper envelopes

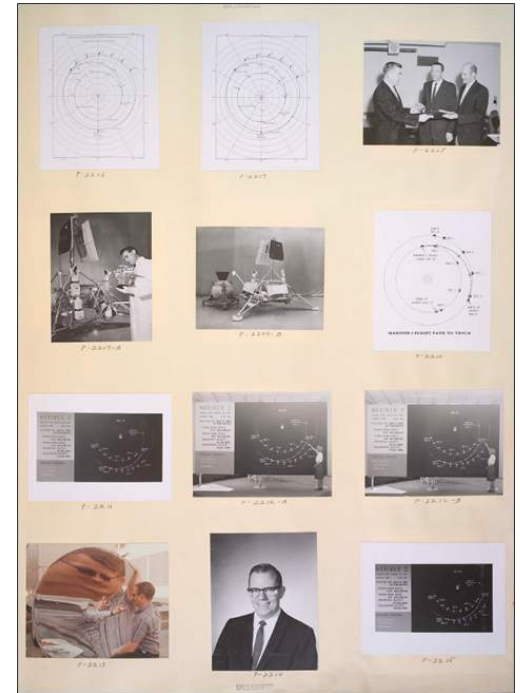
Glassine sleeves

Black paper

Metal cabinets (Photolab)

Acid-free boxes

Small portion of the collection is now in polyester sleeves (~\$45K)



4x5 proof albums

Low res scans for access, not preservation



# Storage of Archival Negatives/Prints

**1940 to the present – the JPL Photolab’s collection of negatives and proof prints has been housed in a wide variety of storage conditions.**

**At 50 years – acid damage can accelerate**

JPL Records Center  
On-site, then off-site 1968 - 1998  
Vendor records storage, 1998 - present



Photolab in Eng. Bldg. 1943  
JB-71



Mobile Photolab, 1947  
JB-362



JPL Photolab dark room, 1943 JB-76



Archives climate controlled  
2004 - Present

# Photo negative preservation project

During a digitization project, vinegar smell was noticed and damage found.

- **Silvering**
- **Color changes**
- **Acid spots**
- **Channeling**

Negatives from the mid-1950s show more damage.



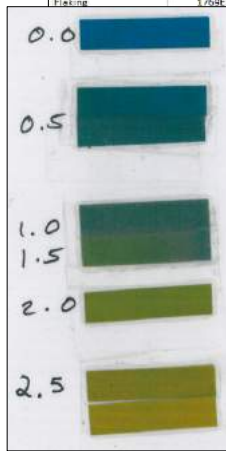
# Photo negative preservation project

Acid detecting strips –

Samples in every box  
and drawer in storage:

On-Lab  
Off-site  
Photolab

1940-1969



Notes	Negs Tested	Test Results	Visible damage -		Visible damage -		Visible damage -	No visible damage
			channeling	beginning silvering	shrinkage	discoloration		
Silvering borders and yellowing	829D	1						1
Yellowing	964	0.5	1					
Yellowing	955A	0.5	1					
Yellowing	955B	0.5	1					
Silvering corners	1136	1.5			1			
Yellowing	1288A	1	1					
Yellowing	1288B	1	1					
Yellowing	1288C	1	1					
Yellowing	1638A	2			1			
Yellowing	1638B	2			1			
Silvering corners	1638C	2			1			
Silvering corners	1638D	2			1			
Flicking	1769A	1	1					
Flicking	1769B	1	1					
Flicking, Silvering borders	1769C	1	1					
Flicking, Silvering borders	1769D	1	1					
Flicking	1769E	1	1					
	1.0			1				
	0.5				1			
	0.5						1	
	0.5							1
	0.5							1
	1.0					1		
	0.5							1
	0.5							1
	0.5							1
	0.5							1

A large, complex spreadsheet table with multiple columns and rows. The table contains various data points, including numerical values, text labels, and color-coded cells (yellow, blue, green, orange). The table is organized into several sections, with some rows highlighted in yellow and others in blue. The data appears to be related to the photo negative preservation project, possibly tracking the status of different samples or drawers.

# Photo negative preservation project

## Refrigerator storage for negatives

40 cubic feet

34° 30-40% humidity

## Withdraw negatives from storage

Separate negatives from prints

Smaller boxes



## National Park Service

Instructions

Supply lists

Conserve O Gram

Video tutorials

Temp	RH	Years to Significant Change
75°F	50%	25
75°F	30%	45
55°F	50%	105
55°F	30%	190
32°F	50%	625
32°F	30%	1170
10°F	30-50%	>3700

The IPI Preservation Calculator for Photo Storage at [www.image-permanenceinstitute.org](http://www.image-permanenceinstitute.org) provides an overall 'life expectancy rating' based on known temperature and relative humidity in storage.



# Photo digitization project

Past interns scanned images from JPL Photolab and Archives – negatives and prints, 1945 to 1976

Parts of the collection:

- No albums

- No scans

- Access is difficult

Scan for access, not preservation.

62-page virtual (PDF) photo album

for visual access to Photolab images.

Full text is searchable.

**4,300 images scanned so far by interns**

Includes 5.5 cf from Archives and

1500 negatives from Photolab

Updates to photo inventory and  
enhanced metadata for finding aids





# Photo digitization project – summer 2017

Intern this summer, 10-12 weeks

Copy stand and camera, loan from JPL Photolab.  
More efficient workflow than flatbed scanner  
High resolution - preservation

Scan negatives from Archives collection  
that are at highest risk. (1940 to 1959)  
Scan proof prints if negative is too damaged  
to scan.

Updates and corrections to photo index,  
enhanced metadata



An aerial, grayscale photograph of a rural landscape. The foreground shows a dirt road and a small, simple building. The middle ground features a large, open field with some scattered trees and a larger, more complex structure. The background consists of rolling hills and more fields under a clear sky.

# Improving Access to Digitized Content through Social Sharing

Camille Mathieu, Part-time Archivist  
[@stembrarian](#)

# Digital Photo Collection

- About 6,000 photos scanned
- Disparate repositories with varying levels of access
- Current access provided through public DocuShare library, library catalog, and Historical Photo of the Month blog

JPL Electronic Library Service

Guest Login

Get Handle: Document  Go

Pub-lib will be unavailable on Saturday, April 29 from 8:00 am to 11:00 am w

This library is open to the public. All documents published in this library must be ap






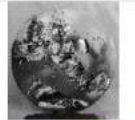

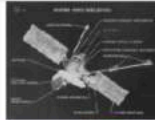


Location: Home » JPLArchives » Images Listing

### Images

Individual images that have been cleared for unlimited public release. They have been displayed on a public web page or cleared and prov

**\*\* Click on Properties icon to display captions. \*\***

Show: 1 - 20 of 248  Sort Order: By Title

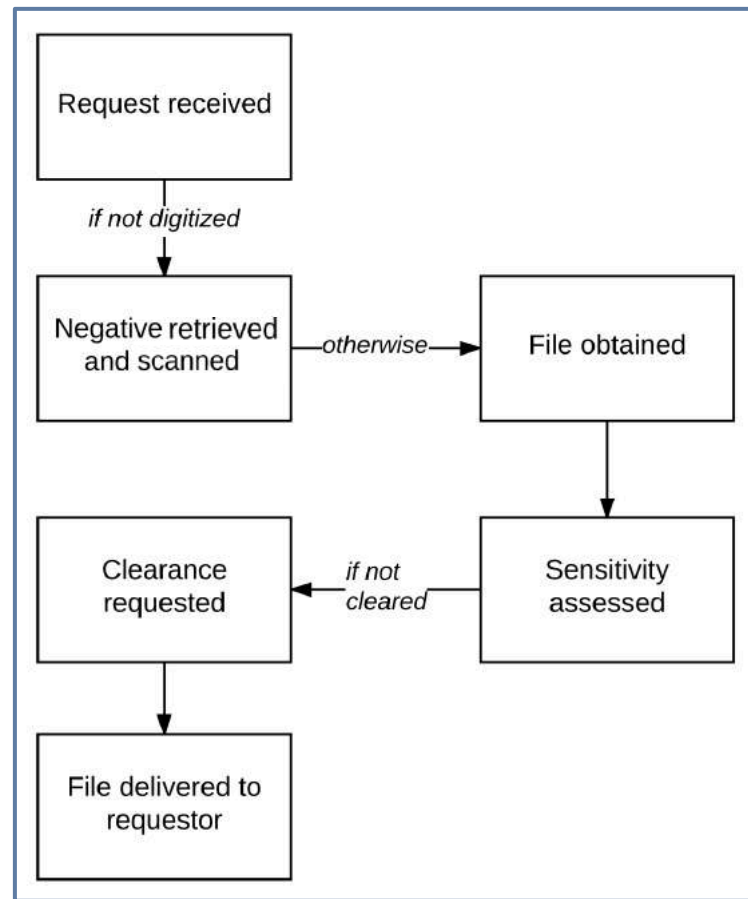
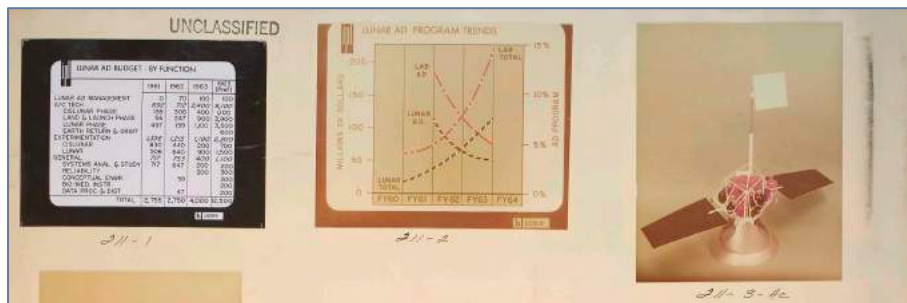
 1_Photo Search and Display Tips 08/14/16   102 KB	 2-Galileo 01/23/13   133	 211-1582B, Surveyor 3 Surface Sampler Test, 06/18/14   166 KB	 211-2072Ac, Surveyor 6 Launch, 1967 06/18/14   110 KB	 211-4293A, Mariner Mars 1971 Photo Mosaic, 1972 06/18/14   1 MB
 241-267, Mariner 6 and 7 Images of Mars, 1970 06/18/14   175 KB	 251-123B, Mariner 10 in Space Simulator, 1973 06/18/14   108 KB	 251-135AA, Mariner 10, 1973 06/18/14   2 MB	 260-1335, Voyager Illustration, 1981 06/18/14   107 KB	 260-230A 08/14/16   71 KB



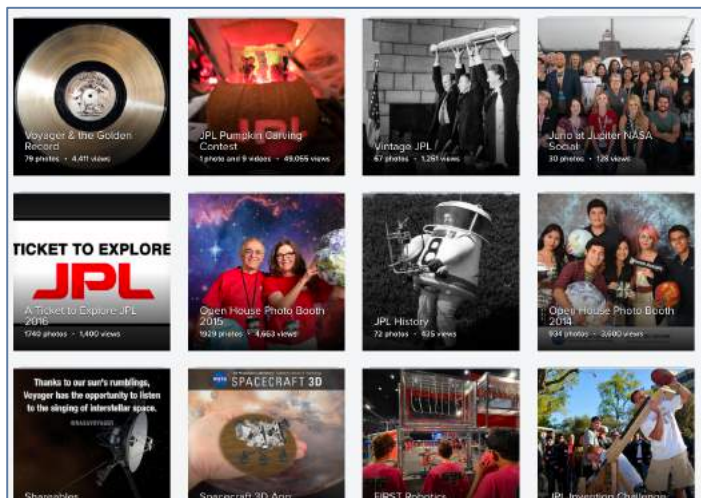
# Accessing Photos

## Graphical and Textual Photo Indexes

6-20-61	(C)	312-1	Table I Units of Variance for Agena System
3-2-61	(U)	312-2 AB	Spacecraft Attitude Reference System
3-2-61	(U)	312-3 AB	Description of Miss-Distance Coordinates
3-2-61	(U)	312-4 AB	Earth-Mars-Solar Geometry
3-2-61	(U)	312-5 AB	Reference Vector Traces on a Mars-Centered Celestial Sphere



# Flickr Photo Sharing



# Benefits of Photo Sharing Platform

- Platform is dynamic, not static
  - Allows for photo aggregation and collection building without duplication
  - Photos + descriptions will automatically adjust to fit the appropriate screen size for the viewer's device
- Publishing on the photo sharing platform primes content for sharing on other platforms
  - Photo and collection “records” allow sharing at both the photo and collection levels
  - Embedded links can be used to create appealing galleries where such functions are not built-in
- Search indexes both photos and collections for web discovery

# “Cataloging” in Flickr

- Has **title**, **description**, and **tag** fields for descriptive metadata
- Date fields keep track of when item was created and when it was uploaded.
  - “Circa” and “Sometime in...”
- Different access restrictions for interaction (comments, tagging)
- Auto-populates with information from photo if available

Editing 1 photo

Magnetic Data Storage, P-8296

From 1967 through the early 1970s, a number of studies were conducted at JPL with the goal of reducing the size of computer memory and developing miniature storage

Who can see this photo **Public** ▼

Who can comment on this photo **Any Flickr member** ▼

Who can add tags and people to this photo **People you follow** ▼

How safe is this photo for public search **Safe** ▼

Copyright protection level for this photo **Attribution** ▼

📷 Date Taken Circa -- 1967 -- : --

📅 Date Uploaded April 2 2017 16 : 35 : 55

🏷️ Add new tags

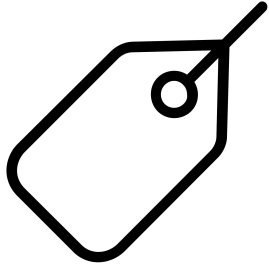
👤 Add people

Laser NASA History

computer science magnet

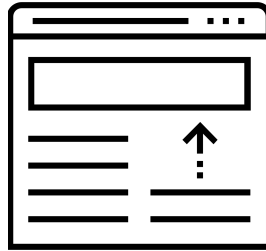
Cancel Save

# Optimizing Content



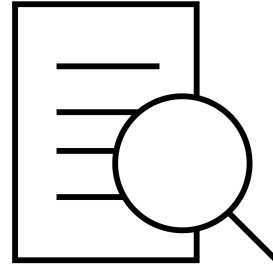
## Tag robustly

Use tags popular in the platform to increase chances of being searched/boosted.



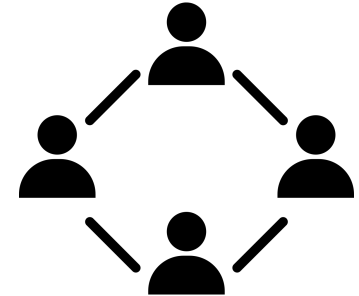
## Descriptive title

Include descriptive language in both record title and file name.



## Use all fields

If you don't understand a field, research the best way to use it – don't ignore it!



## Be social

The more your collections are shared and linked, the higher your search ranking.

# Historical Photo of the Month

- WordPress blog run by the JPL Archives since December 2009 (online since 1996).
- Viewable by both internal (JPL) and external (public) users

**BEACON** information COMMONS  
JPL LIBRARY, ARCHIVES AND RECORDS SECTION

**H O M E**

Search  
Browse  
Renew Items  
Library Services  
JPL Stories  
Archives  
Records Management Group  
Marking & Handling  
JPL Authors  
News and Events  
Customer Satisfaction Survey  
Division 27  
Login with JPL Username

**HISTORICAL PHOTO OF THE MONTH**  
March 2017  
March 31st, 2017

Click on photo to see larger image



**Imager for Mars Pathfinder**  
Photograph Number JPL-26090

This photo of the IMP (Imager for Mars Pathfinder) was taken in August 1996. The experiment was developed by a team led by the University of Arizona, and was tested and calibrated at U of A and JPL. Its extendable mast was stowed inside a round canister which was mounted on the Mars Pathfinder lander.

Pathfinder was launched on December 4, 1996 and landed on July 4, 1997. After the airbags deflated and the lander petals opened, the IMP was deployed. The canister opened and a fiberglass and wire mast lifted the camera to a height of about 1.5 meters (5 feet) above the Martian surface. Once it was verified that the surrounding area was safe, the Sojourner rover rolled down a ramp, onto the rocky surface of Mars. 256 x 256 pixel stereo image pairs from the IMP were used to study the geology, topography, and atmosphere of Mars, and to track the movements of the rover. IMP returned more than 16,000 images before Pathfinder's last data transmission on September 27, 1997.

For more information about the history of JPL, contact the [JPL Archives](#) for assistance. [Archival and other sources: Minutes of the Fifth and Sixth IMP Science Team Meetings, 1995 and 1996; MPF Landing Press Kit; NSSDC web site; MPF web sites; and D-13383 drawings/correspondence.]

Posted in [Historical Photo of the Month](#) | [Add Comment](#)

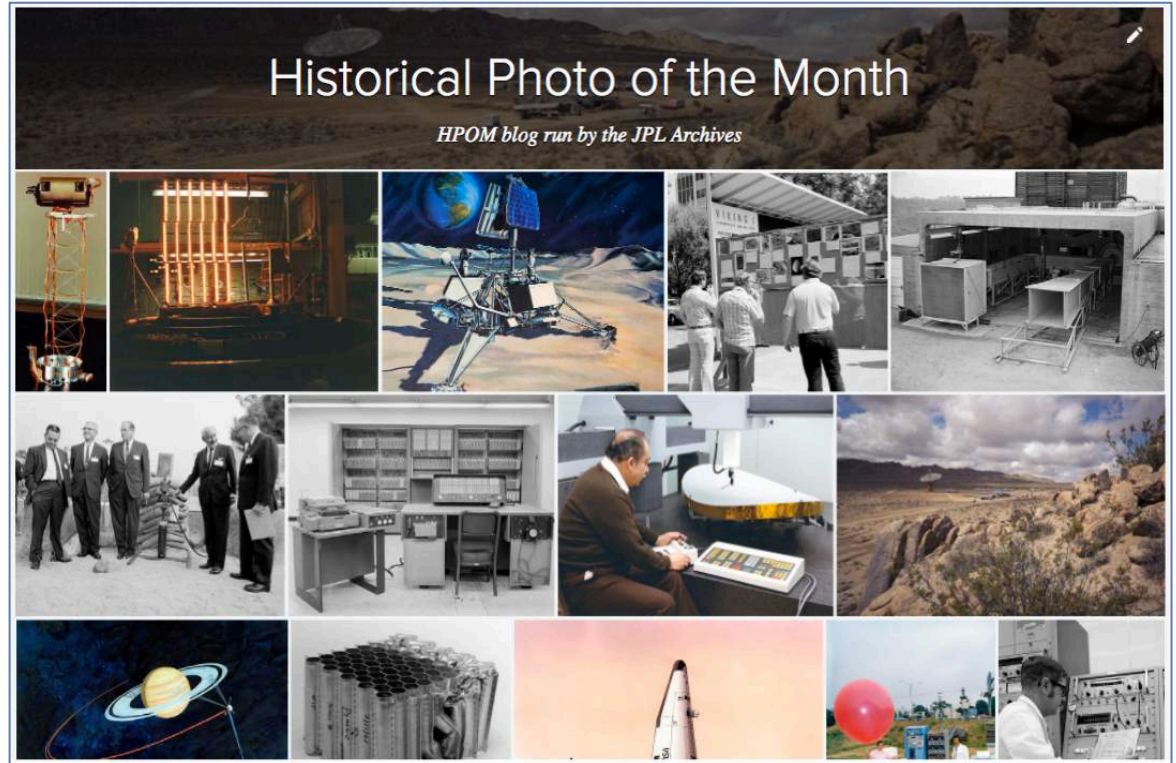
BEACON > Historical Photo of the Month

Archives:  
Browse by Month  
Browse by Month  
Go  
Browse by Year  
Browse by Year  
Go  
[View Historical Photo of the Month Collection](#)



# Historical Photo of the Month

- With migration of Beacon site, needed:
  - Public platform
  - Optimized for photo search and discoverability
  - Supportive of social sharing



# Displaying Photos in LibGuides: Before

## Finding Historical Documents in the JPL Archives: Photos & Multimedia

Finding aids for the different types of materials in the Jet Propulsion Laboratory Archives collection.

Search this Guide Search

Home People & Organizations Missions & Projects Photos & Multimedia Buildings & Facilities Flickr Example

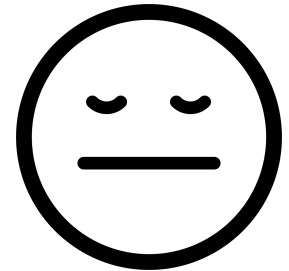
HPOM

October 2016 September 2016 August 2016



**Rocket Motor Test – 32nd Anniversary, 1968**  
Photograph number P-9067A  
(History Collection folder 3-68)

On October 31, 1968 JPL celebrated the 32nd anniversary of the first rocket motor tests in the Arroyo Seco. The five men in this photo were present at the series of tests that happened in 1936 and 1937, and they came back to JPL for the celebration. From left to right are: William C. Rockefeller, William A. Bolly, Edward S. Forman, Frank J. Malina, and Apollo M.O. Smith. The historical marker found in the JPL Mall was commemorated at this event, and they posed next to a replica of the rocket motor test stand. The photo on the right shows a print of a 1936 test stand drawing by Frank Malina. He was the Chief Engineer of what would later become JPL, and was Acting Director from 1944 to 1946. For more information about the history of JPL, contact the JPL Archives for assistance. [Archival and other sources: various History Collection documents, photo albums, Lab-Oratory.]





# Displaying Photos in LibGuides: After


Finding Historical Documents in the JPL Archives: Photos & Multimedia

Finding aids for the different types of materials in the Jet Propulsion Laboratory Archives collection.

[Home](#) [People & Organizations](#) [Missions & Projects](#) [Photos & Multimedia](#) [Buildings & Facilities](#) [Flickr Example](#)

Flickr Slideshow

## Historical Photo of the Month

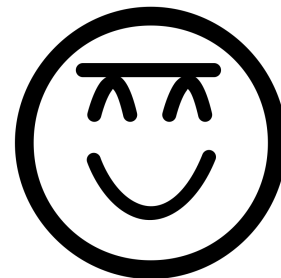


**May 2016 - Surveyor Soft Lunar Landing, 1966**

Surveyor mission planning began in 1960. The mission included seven spacecraft that would soft land on the Moon, using three vernier engines and a retrorocket. The spacecraft would collect data and images of the surface, in order to ensure a safe landing for Apollo astronauts a few years later. Hughes Aircraft Company was selected to design and build the landers and the project was managed by JPL, which also provided tracking and communications. Surveyor 1 was launched on May 31, 1966, landed on the Moon June 2, and sent back more than 11,000 photos of the lunar surface. The entire image set from Surveyors 1-7 has recently been digitized, and will soon be added to NASA's Planetary Data System.

This image was created by Hughes artist Carlos Lopez. It was used in a Surveyor poster, which was a common practice in the days before computer aided drawing. This poster was recently received by the JPL Archives, as part of a collection of Surveyor documentation.

For more information about the history of JPL, contact the JPL Archives for  
Taken on May 27, 2016  
0 views, 0 comments



# Final Thoughts

- **Disadvantages of Photo Sharing Platforms**
  - Not for preservation
    - Even if used as only photo repository, still necessary to do bulk downloads to local storage for preservation
    - TIFF files are not supported
  - May have some associated monthly or annual cost, or cost based on space usage
- **Moving forward**
  - Use Flickr collections as entry points for archives' preservation or local holdings
  - Cultivate photo metadata entry in such a way that standard or preservation-quality metadata is captured for secondary use in photo-sharing platforms



**Jet Propulsion Laboratory**  
California Institute of Technology

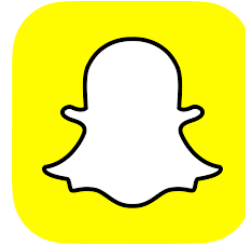
# Social Media Outreach for Smaller Archives

Patricia Delara, Upland Public Library

# Introduction

---

If you know your audience, you will know which social media platform to use.



But also think: what is the best way to highlight YOUR collection?



# Different mediums, different methods

---

Instagram is a popular choice among many larger archive institution accounts.

Curated gallery of photos.



130 posts

1,123 followers

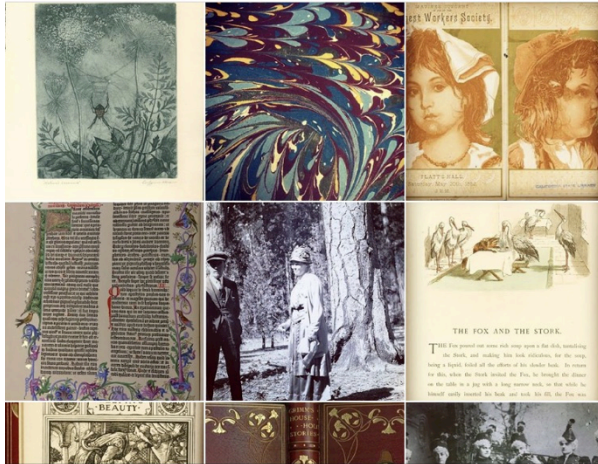
791 following

Following [dropdown arrow]

### California State Library

is where you can find anything you want about California's past, present, and future. #castatelibrary [www.library.ca.gov/](http://www.library.ca.gov/)

Followed by [hollywoodapl](#), [santacruzpl](#), [pepperdine\\_libraries](#) + 26 more



1,064 posts

43.3K followers

126 following

Follow [dropdown arrow]

### US National Archives

The nation's record keeper. Visit our new web portal to #WW1 records. [bit.ly/2o5Ee1k](http://bit.ly/2o5Ee1k)

Followed by [santacruzpl](#), [laacollective](#), [littlebrown](#) + 23 more





uplandpubliclibrary



View Insights

Promote



46 likes

uplandpubliclibrary Uplanders dressed in their best! This photo #fromtheUPLarchives is dated on March 14, 1897. Captioned: Upland Photograph People... more

mauragraber Wonderful old photo!

thedlc5 So cool!

FEBRUARY 26



uplandpubliclibrary

uplandpubliclibrary The skies cleared up and it's a beautiful day out! Perfect time to drive with the top down, just like this gentleman here #fromtheUPLarchives!

#archivefinds #libraryfaves #libraryfinds #archives #archivesofig #librariesofig #uplandca #history #cahistory



29 likes

1 DAY AGO

Add a comment...



# #HASHITOUT

---

Clever hashtags are a unique way of organizing your specific photos.

Upland Public Library's Local History hashtag: **#fromtheUPLarchives**

MAKE YOUR HASHTAGS STAND OUT!

BE UNIQUE!

TOP POSTS



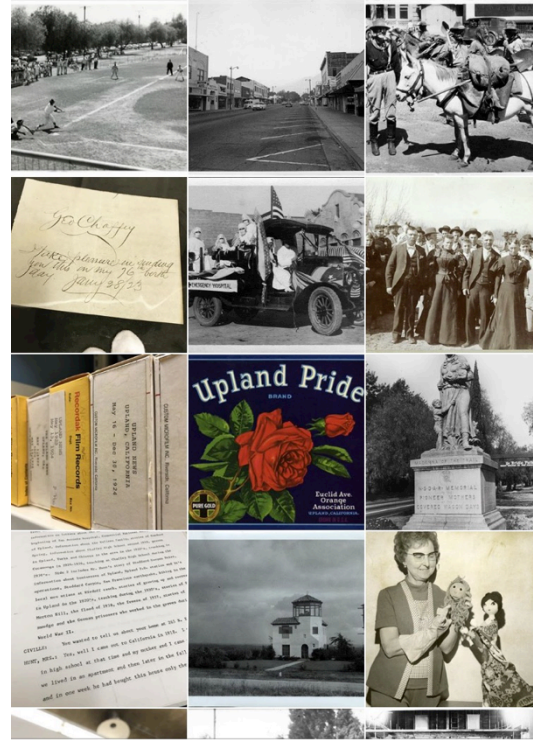
MOST RECENT

40 public posts



MOST RECENT

40 public posts





# Effective ways to reach your audience

---  
Insights and analytics!

Available on social media if your account is a business account!

Target your audience!



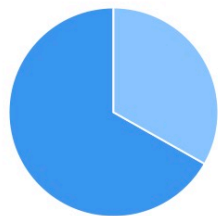
The screenshot shows a social media profile for 'uplandpubliclibrary'. The profile header includes a plus sign with a red circle containing the number '3', the name 'uplandpubliclibrary' with a dropdown arrow, and an analytics icon (a bar chart) which is circled in red. Below the header, there is a profile picture of a library building, a blue 'Contact' button, and a white 'Edit Profile' button. The profile statistics are: 243 posts, 564 followers, and 278 following. The bio reads 'Upland Public Library' and 'Library For all the chapters of your life.' with icons of books, a heart, and a pencil. The website URL 'www.uplandpl.lib.ca.us/' is listed at the bottom.

Category	Count
posts	243
followers	564
following	278

555 followers

+11 new this week

### GENDER



67%

Women

33%

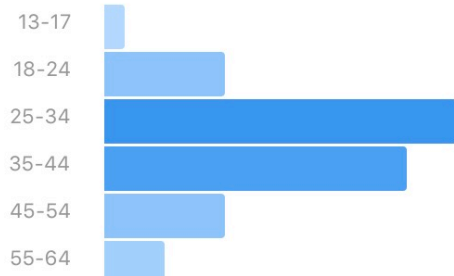
Men

### AGE RANGE

All

Men

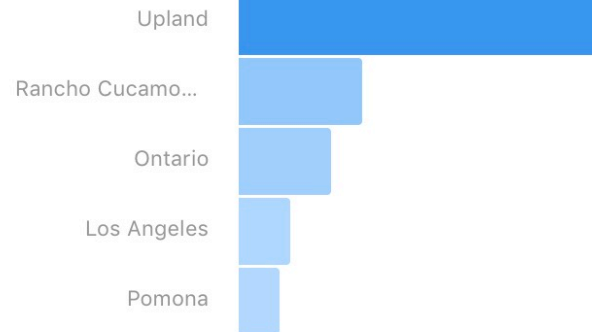
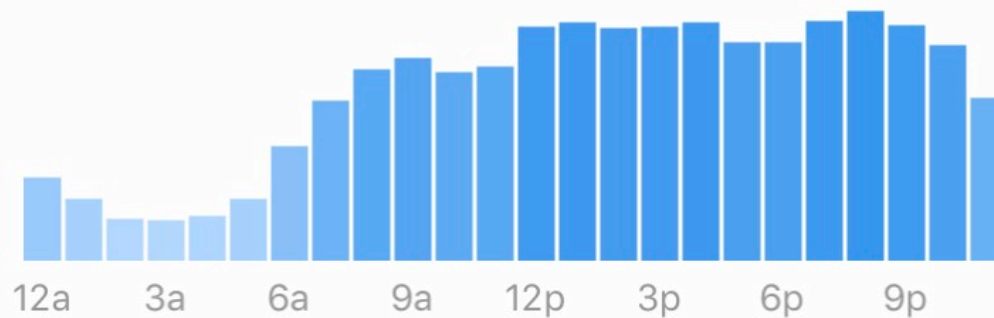
Women



### FOLLOWERS

[See More](#) >

### Thursdays



# Have fun, and be creative!

---

Come up with creative ways to describe your collection.

It's okay to be silly - making it appropriate to what you're posting is better!

<https://instagram.com/p/BM7Rs4-AqPc/>

# Observations

---

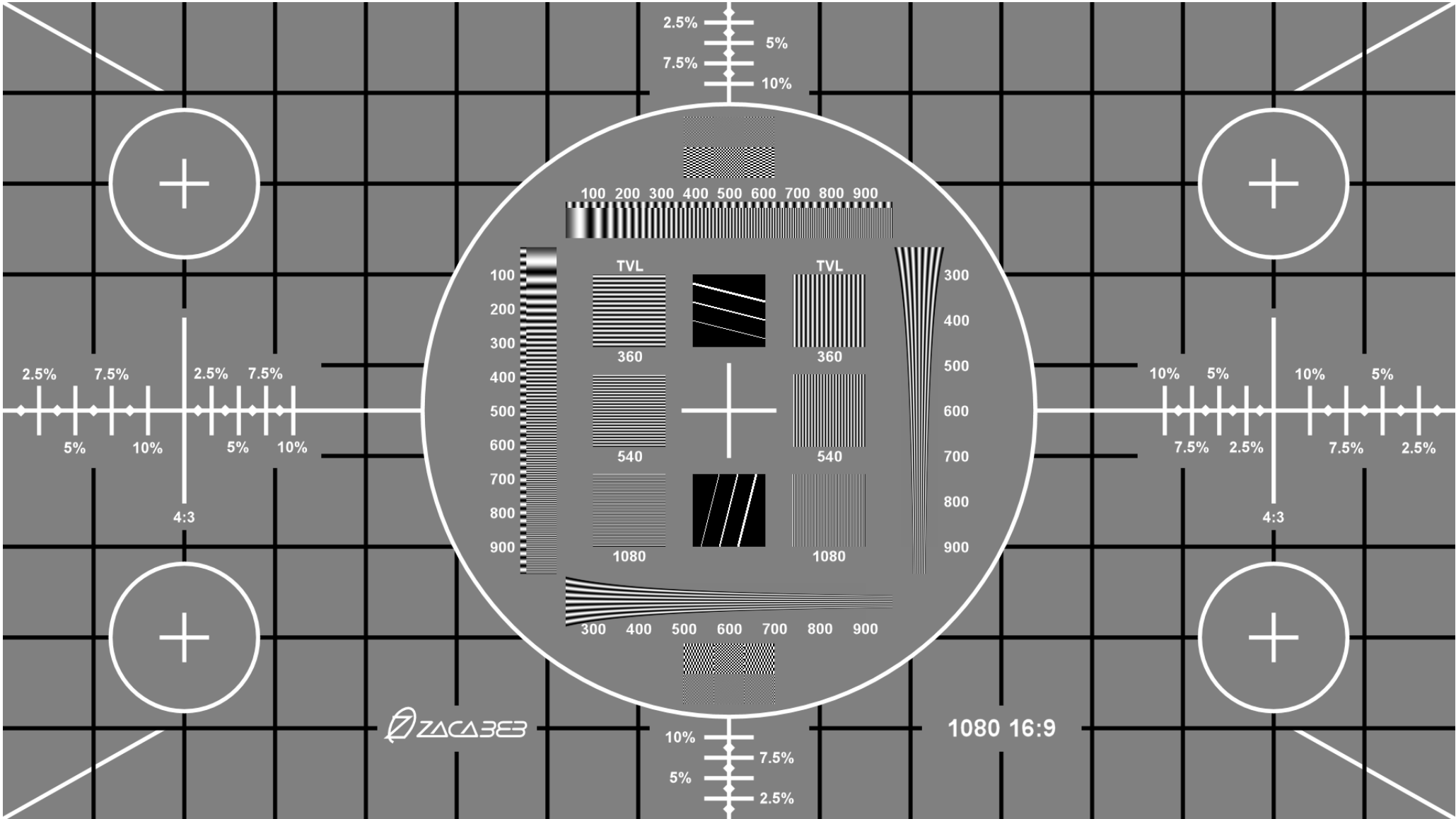
Over time, your followers will notice your efforts.

Loyal likers, loyal followers!

Overall, what matters is...

Your collection is out there!





**Video Examples and  
Slides available:**

<http://bit.ly/scavideoqc>



The Future Looks Good:  
*Video Quality in Reformatting Projects*

Michael Angeletti  
Society of California Archivists 2017 AGM  
April 29, 2017



Television Broadcasts

Documentary Film Production

Radio Broadcasts

Museum Exhibits

Award Ceremonies or  
Special Event Presentations

Live Multimedia Performance

Donor Fundraising Events

Evidence Used in Litigation

Installation Art

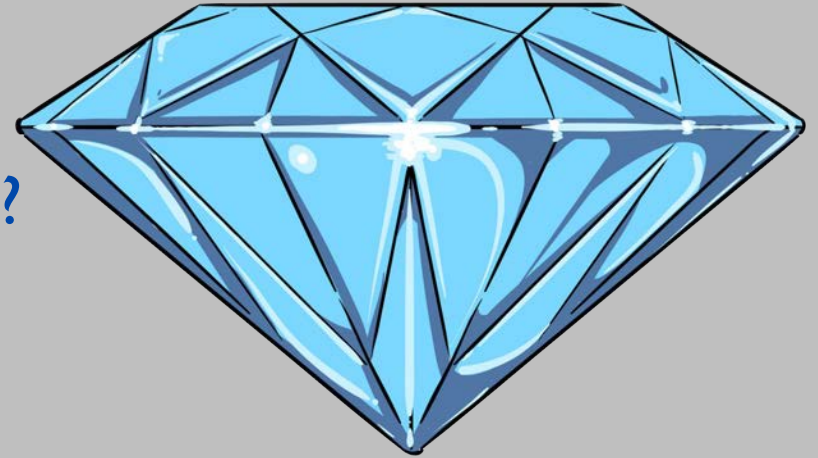
Presentations to  
Board of Trustees

Online Exhibits (Spotlight)



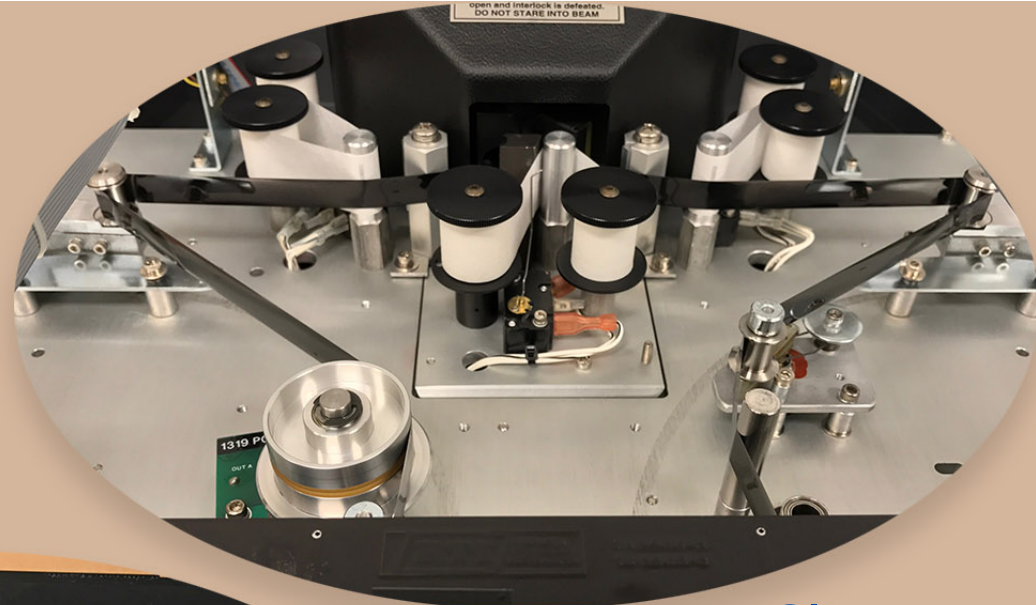


## Specific Questions About Problems With Digitized Moving Images ?



- AV Artifact Atlas
- *Compendium of Image Errors in Analogue Video* (Gfeller, Jarczyk & Phillips)
- Association of Moving Image Archivists email discussion list
- Direct contact with a specialist or technician

During the production phase of a reformatting project, whether in-house or outsourced, what processes or activities have the most determinative effect on the quality of digitized or reformatted video ?



Heat Treatment (baking)

Cleaning



Rehousing

# Machine Performance



Good machines produce archival quality pictures and audio.

Overused and undermaintained machines do not.

# Video Signal Output Formats

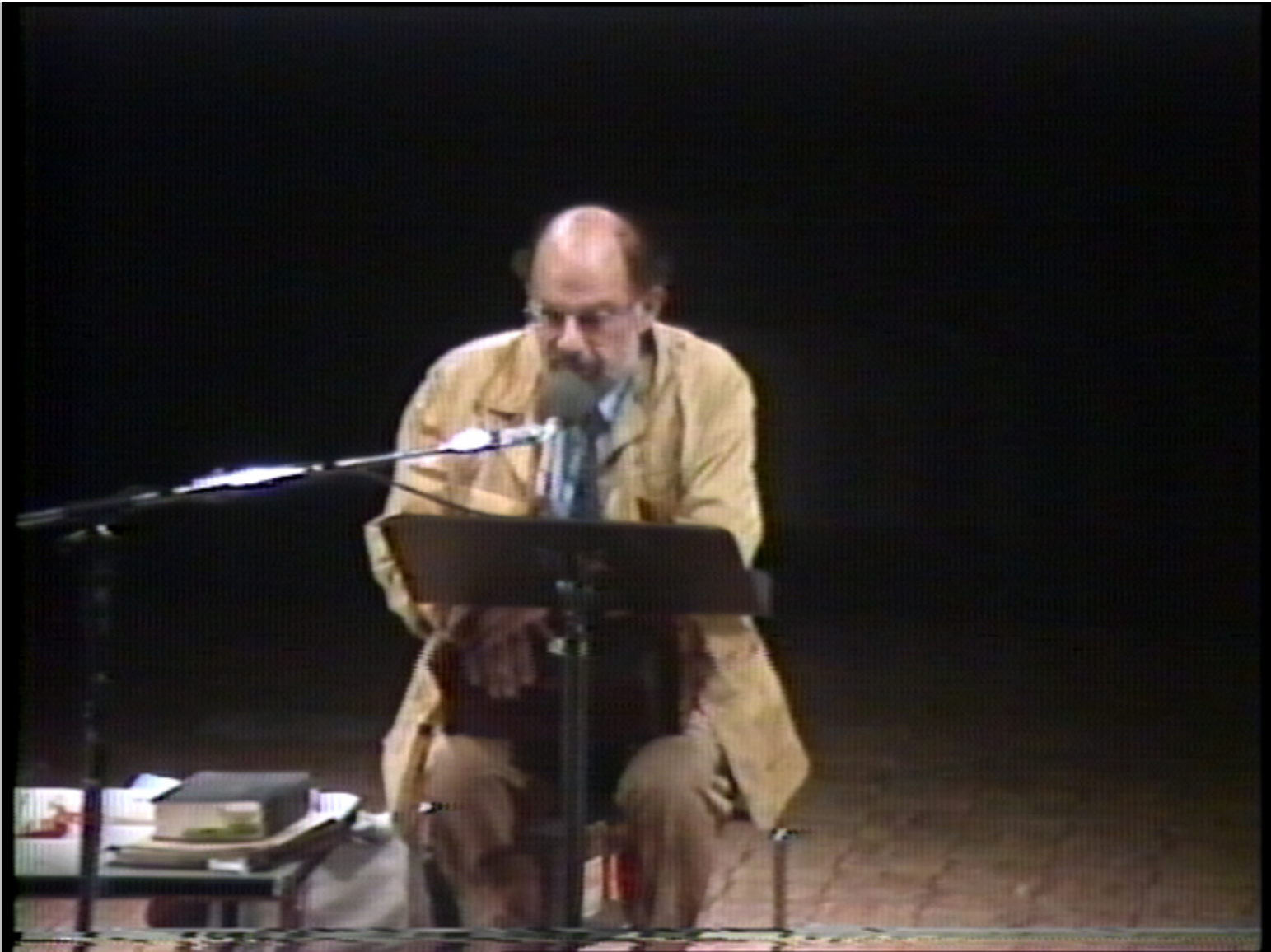


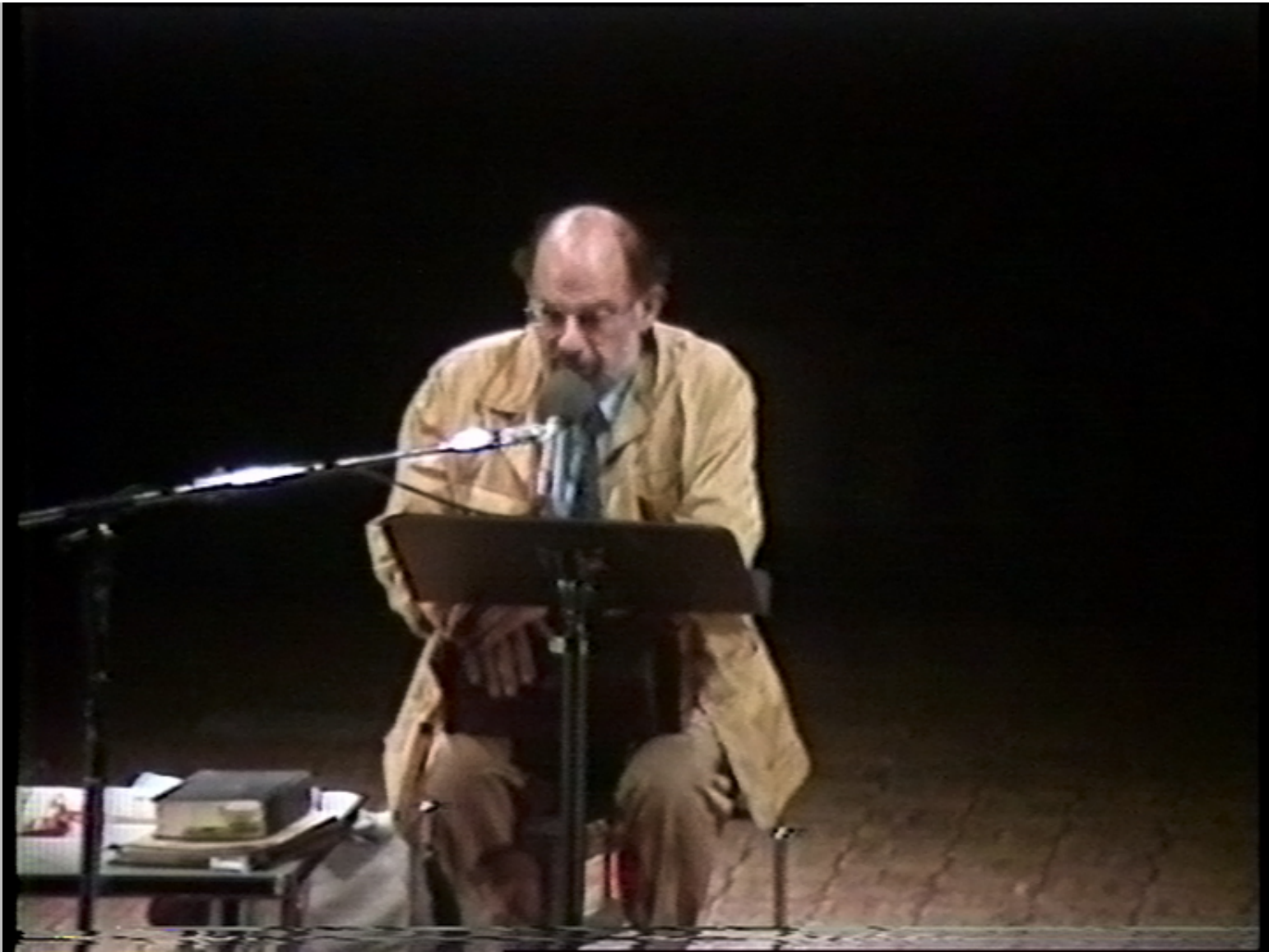
← COMPOSITE VIDEO OUTPUT  
(lower quality)

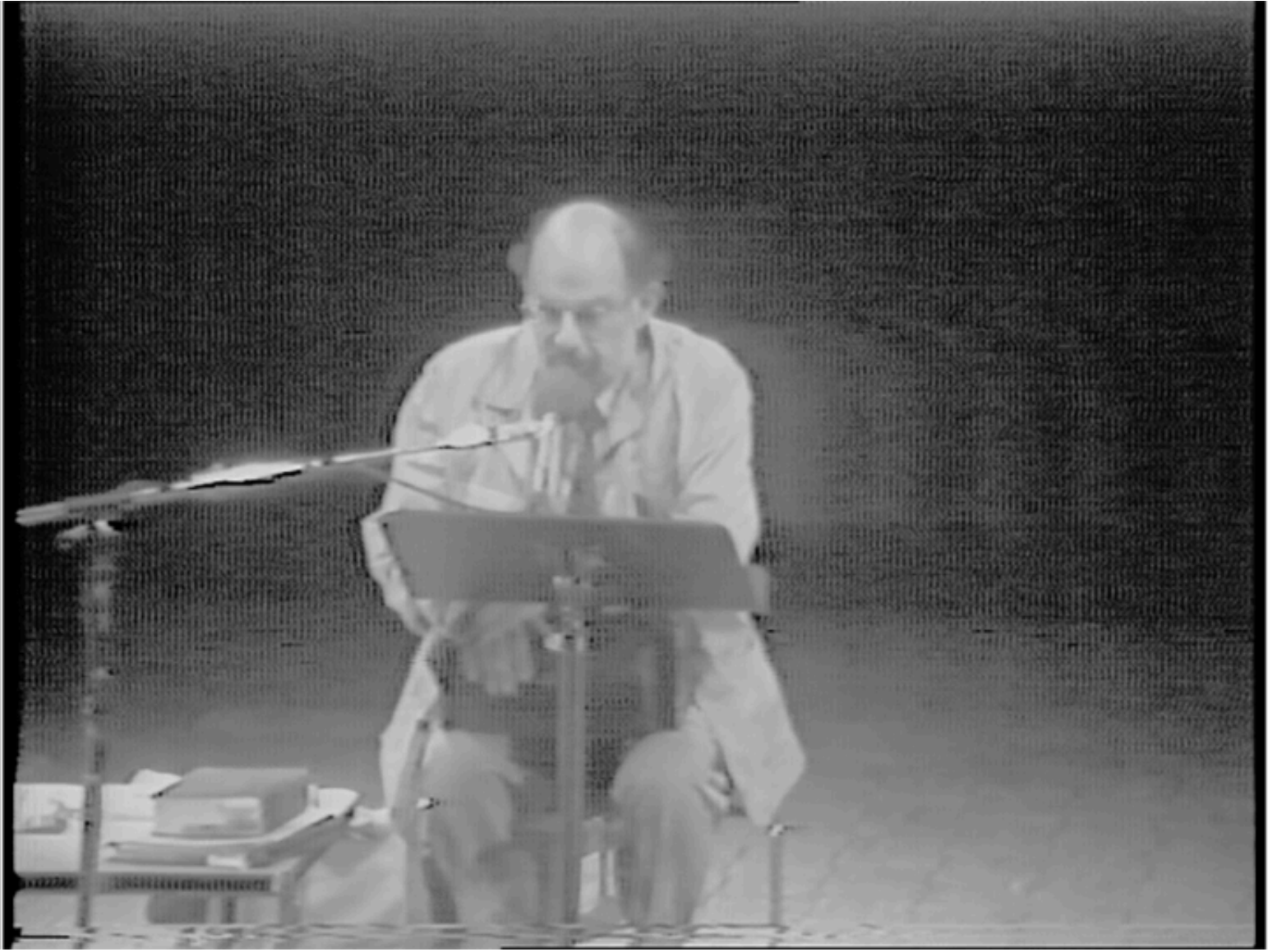
← DUB (Y/C) OUTPUT  
(higher quality)

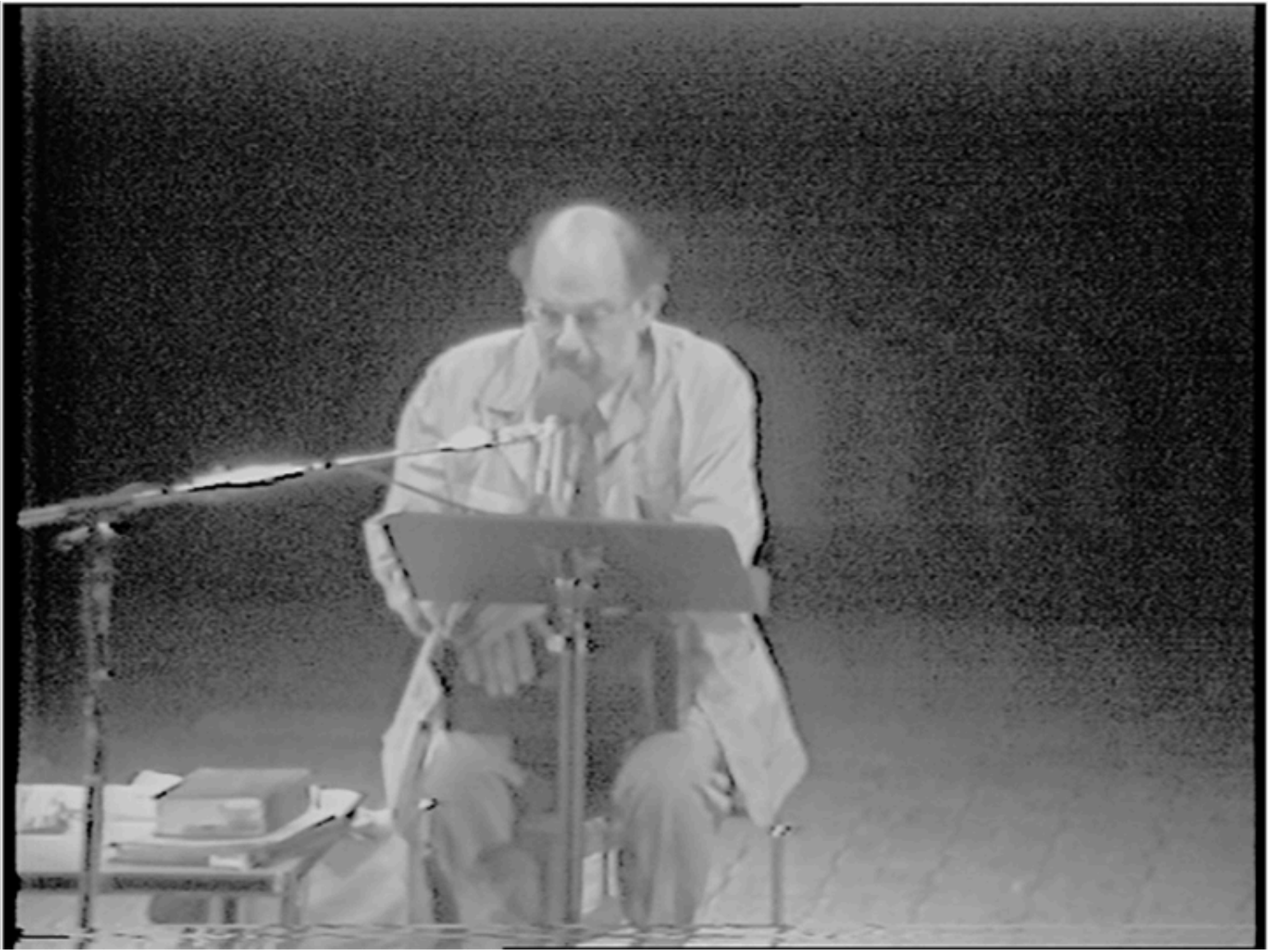
Sony BVU-950 U-matic Tape Machine  
(broadcast/editing use)











# Video Signal Output Formats Recommendations

Videotape Format	Recommended Signal Output Format
U-matic	DUB (7-pin connector)
VHS or S-VHS	S-Video or Component
8mm or Hi8	S-Video
Panasonic MII	Component (Y/R-y/B-y)
Betacam & Betacam SP	Component (Y/R-y/B-y)
Digital Betacam	Component Serial Digital (SDI)



# Video Levels



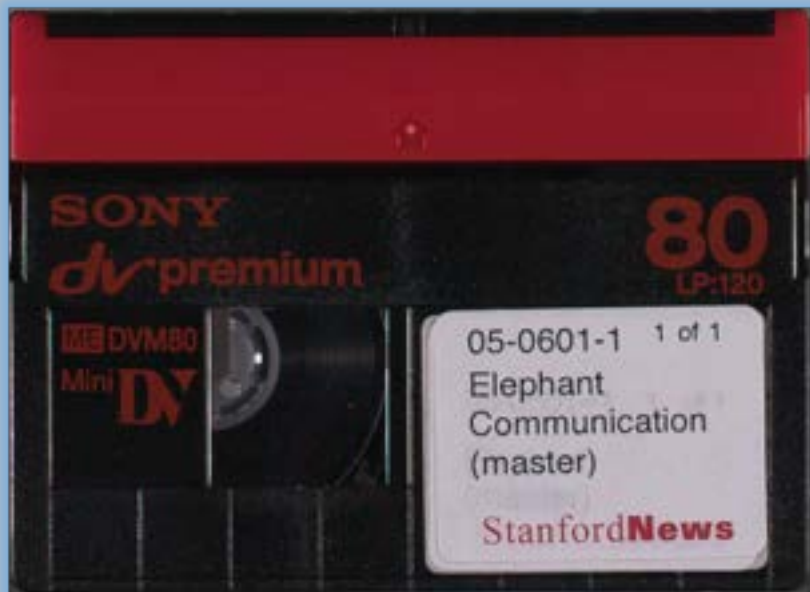
I recommend :

*How Video Works: From  
Analog to High Definition*

by Marcus Weise &  
Diana Weynand  
(see resource guide)

05\_clipped\_luminance\_example\_hero.mp4

# MiniDV



- “captured” not “digitized”
- Bits are moved from tape into file over IEEE 1394 OHCI
- Use DV Analyzer for inspection

# DV Analyzer

DV Analyzer - AudioVisual Preservation Solutions, Inc.

File Summary | Frame Table | Frame Text | XML | FCP v5 | FCP v6 | FCP v7 | MediaInfo

DV Analyzer v.1.4.0 by AudioVisual Preservation Solutions, Inc. <http://www.avpreserve.com>


/Volumes/BDAV1\_storage/MiniDV\_ready\_to\_QC/041317\_g-raid-2/ms475yb5436/pm/ms475yb5436\_pm.mov

Frame Count: 72561

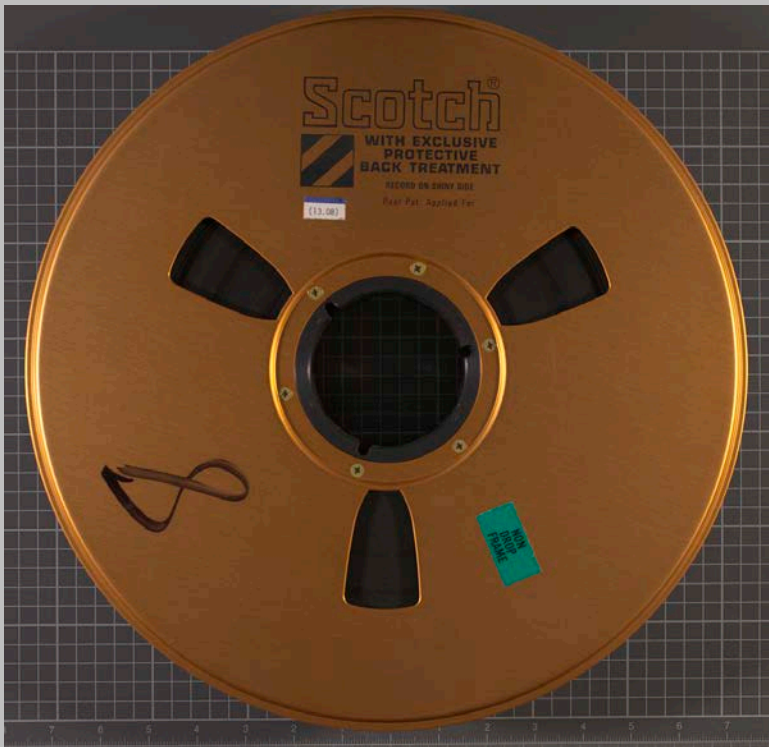
Frame count with video error concealment: 24 frames  
Total video error concealment: 3987 errors ( 1 "5" errors, 3986 "A" errors)  
Frame count with DV timecode incoherency: 3 frames  
Frame count with Arbitrary bit inconsistency: 2 frames

Absolute time	DV timecode range	Recorded date/time range	Frame range
00:00:00.000	00:00:00;22 - 00:00:20;22	2005-11-04 12:43:15 - 2005-11-04 12:43:35	0 - 600
00:00:20.053	00:00:20;23 - 00:00:42;28	2005-11-04 13:26:36 - 2005-11-04 13:26:57	601 - 1266
00:00:42.275	00:00:42;29 - 00:02:57;03	2005-11-04 13:29:47 - 2005-11-04 13:32:01	1267 - 5287
00:02:56.443	00:02:57;04 - 00:06:17;21	2005-11-04 13:32:40 - 2005-11-04 13:35:59	5288 - 11297
00:06:16.976	00:06:17;22 - 00:07:19;12	2005-11-04 13:38:53 - 2005-11-04 13:39:54	11298 - 13146
00:07:18.672	00:07:19;13 - 00:09:06;03	2005-11-04 13:40:16 - 2005-11-04 13:42:01	13147 - 16343
00:09:05.345	00:09:06;04 - 00:14:27;27	2005-11-04 14:15:36 - 2005-11-04 14:20:57	16344 - 25989
00:14:27.200	00:14:27;28 - 00:17:31;21	2005-11-04 14:21:08 - 2005-11-04 14:24:12	25990 - 31497
00:17:30.984	00:17:31;22 - 00:40:21;24	2005-11-04 14:24:34 - 2005-11-04 14:47:23	31498 - 72560

Percent of frames with Error: 0.04%  
Percent of frames with Error (including Arbitrary bit inconsistency): 0.04%  
Percent of frames with Video Error Concealment: 0.03%  
Percent of frames with Timecode Incoherency: 0.00%  
Percent of frames with Arbitrary bit inconsistency: 0.00%

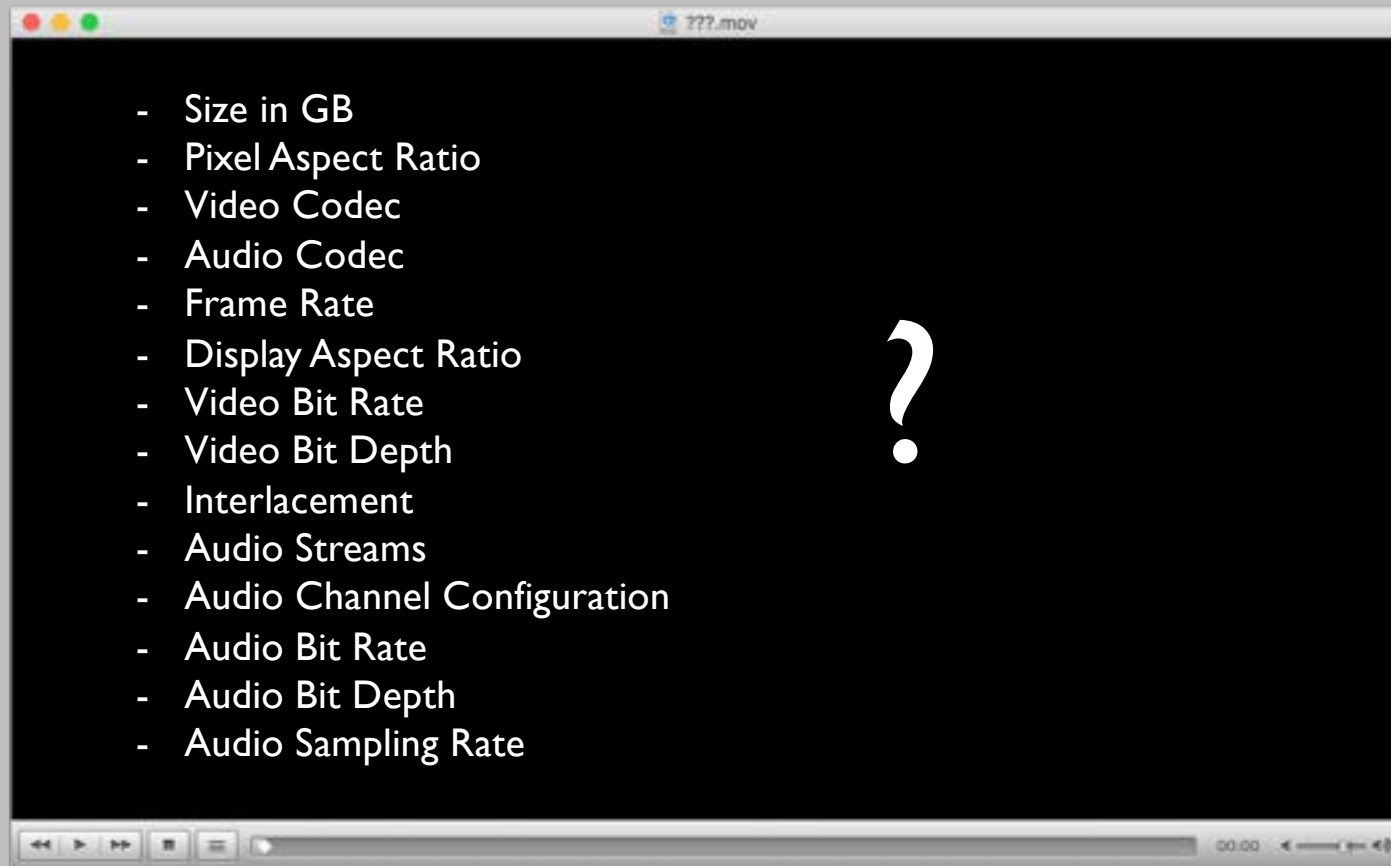


# Image Your Media Before Reformatting



- Preserves potentially helpful information about the *record of note*
- Facilitates identification of metadata/tape content mismatch

# Verify Technical Metadata





# MediaInfo

# Command Line Interface

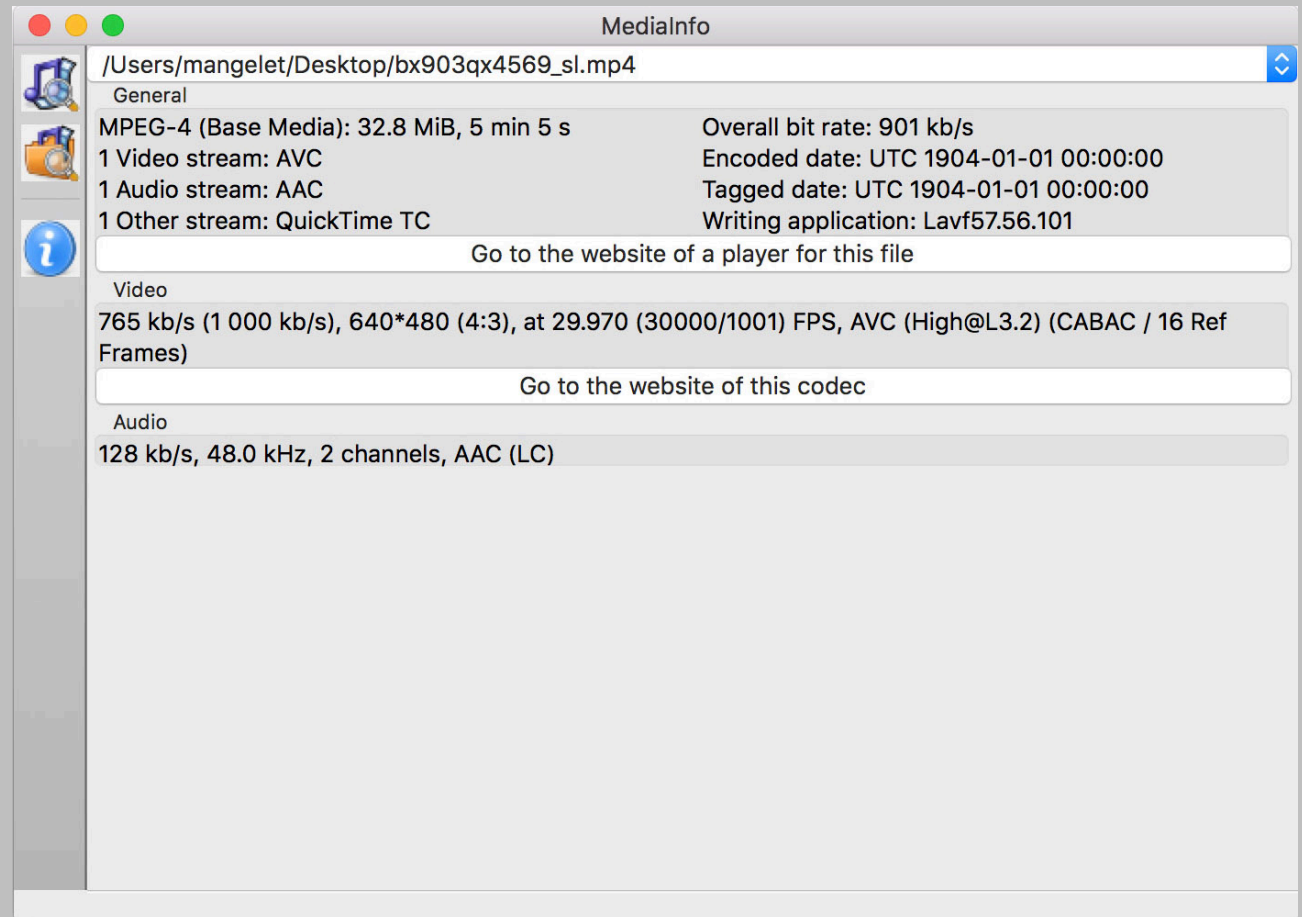
```
my_cool_file_for_preservation -- -bash -- 204x60
li-sm-6018-4561:my_cool_file_for_preservation mangellet$ mediainfo -i /Users/mangellet/Desktop/my_cool_file_for_preservation/preserve_this_cool_file_for_1000_years.mov
General
Complete name          : /Users/mangellet/Desktop/my_cool_file_for_preservation/preserve_this_cool_file_for_1000_years.mov
Format                 : MPEG-4
Format profile         : QuickTime
Codec ID               : qt_2005.03 (qt )
File size              : 972 MiB
Duration               : 36 s 38 ms
Overall bit rate mode : Constant
Overall bit rate      : 226 Mb/s
Encoded date           : UTC 2017-04-24 20:40:18
Tagged date            : UTC 2017-04-25 03:51:36
Writing library        : Apple QuickTime 7.7.3
com.apple.quicktime.player.movie.audio.m : (Binary)

Video
ID                     : 1
Format                 : YUV
Codec ID               : v210
Codec ID/Hint          : AJA Video Systems Xena
Duration               : 36 s 38 ms
Source duration        : 36 s 69 ms
Bit rate mode          : Constant
Bit rate               : 224 Mb/s
Width                  : 720 pixels
Clean aperture width   : 704 pixels
Height                 : 486 pixels
Clean aperture height  : 480 pixels
Display aspect ratio   : 4:3
Clean aperture display aspect ratio : 4:3
Frame rate mode        : Constant
Frame rate             : 29.970 (29970/1000) FPS
Standard               : NTSC
Color space            : YUV
Chroma subsampling     : 4:2:2
Bit depth              : 10 bits
Compression mode       : Lossless
Bits/(Pixel*Frame)     : 21.333
Stream size            : 961 MiB (99%)
Source stream size     : 962 MiB (99%)
Language               : English
Encoded date           : UTC 2017-04-24 20:40:02
Tagged date            : UTC 2017-04-25 03:51:36
Color primaries        : BT.601 NTSC
Transfer characteristics : BT.709
Matrix coefficients     : BT.601

Audio
ID                     : 2
Format                 : PCM
Format settings, Endianness : Little
Format settings, Sign  : Signed
Codec ID               : in24
Duration               : 36 s 38 ms
Bit rate mode          : Constant
Bit rate               : 2 304 kb/s
Channel(s)             : 2 channels
Channel positions       : Front: L R
Sampling rate          : 48.0 kHz
Bit depth              : 24 bits
```

# MediaInfo

## Graphical User Interface



# Media Info Mac v0.7.36

The screenshot shows the MediaInfo Mac application window. The title bar reads "MediaInfo Mac". Below the title bar are three colored window control buttons (red, yellow, green) on the left, and an "Updates" button with a green circular arrow icon on the right. Below these are two buttons: "Open File" with a magnifying glass icon and "Export" with a document icon. The main content area is a scrollable list of metadata, organized into sections with expandable/collapsible arrows. The "General / Container Stream #1" section is expanded, showing file format, play time, and stream information. The "Video Stream #1" section is also expanded, showing codec details (AVC, High@L3.0), resolution (640x480), frame rate (29.970 fps), and other video-specific settings. The "Audio Stream #1" section is partially visible at the bottom, showing codec (AAC) and channel information. At the bottom of the window, there is a "Publish" button and a text field containing the filename "xs556dn3633\_sl.mp4".

MediaInfo Mac

Open File Export Updates

▼ General / Container Stream #1

- Total Video Streams for this File : 1
- Total Audio Streams for this File : 1
- Video Codecs Used : AVC
- Audio Codecs Used : AAC LC
- File Format : MPEG-4
- Play Time : 8mn 50s
- Total File Size : 72.5 MiB
- Total Stream BitRate : 1 147 Kbps
- Encoded with : Lavf56.25.101

▼ Video Stream #1

- Codec (Human Name) : AVC
- Codec (FourCC) : avc1
- Codec Profile : High@L3.0
- Frame Width : 640 pixels
- Frame Height : 480 pixels
- Frame Rate : 29.970 fps
- Total Frames : 15888
- Display Aspect Ratio : 4:3
- Scan Type : Progressive
- Color Space : YUV
- Codec Settings (Summary) : CABAC / 4 Ref Frames
- QF (like Gordian Knot) : 0.103
- Codec Settings (CABAC) : Yes
- Codec Settings (Reference Frames) : 4
- Video Stream Length : 8mn 50s 130ms
- Video Stream BitRate : 950 Kbps
- Video Stream BitRate Mode : VBR
- Bit Depth : 8 bits
- Video Stream Size : 59.9 MiB (83%)
- Video Encoder : x264 - core 144 r2533 c8a773e
- Video Encoder (Settings) : cabac=1 / ref=3 / deblock=1:0:0 / analyse=0x3:0x1
- Video Stream Language : English

▼ Audio Stream #1

- Codec : AAC
- Codec (FourCC) : 40
- Audio Stream Length : 8mn 50s 243ms
- Audio Stream BitRate : 192 Kbps
- Audio Stream BitRate Mode : VBR
- Number of Audio Channels : 2
- Audio Channel's Positions : Front: L R
- Sampling Rate : 44.1 KHz

Publish xs556dn3633\_sl.mp4

# Avoiding Mishaps

- Provide appropriate technical details in your specifications
- Speak with a production manager or entire production team, if possible
- Don't have vendors return tapes until they have resolved any QC concerns with files

# A Few Examples of Issues with Outsourced Digitization

06\_long\_play\_wrong\_machine\_bad\_hero.mp4



07\_long\_play\_right\_machine\_good\_hero.mp4

08\_mystery\_problem\_comp\_hero.mp4

<http://bit.ly/scavideoqc>



Thank You SCA !