



# From Mass Digitization to Description: Indiana University's Strategy to Overcome the Next Great Challenge

Chris Lacinak, AVPreserve  
Jon Dunn, Indiana University

AMIA Conference - Pittsburgh  
November 10, 2016

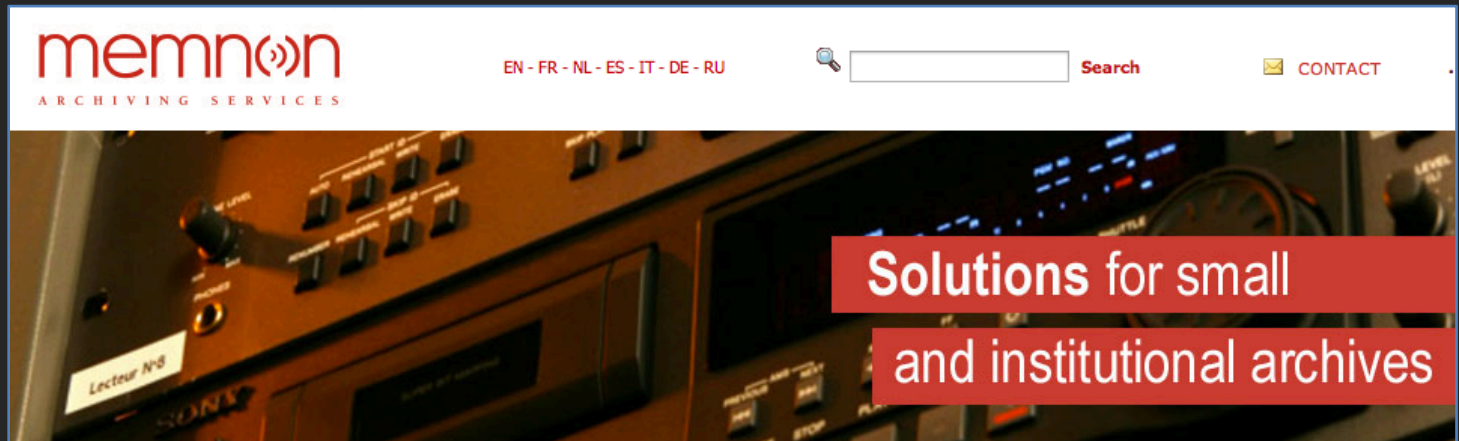
# MDPI: Media Digitization and Preservation Initiative

- Goal: “To digitize, preserve and make universally available by IU’s Bicentennial—subject to copyright or other legal restrictions—all of the time-based media objects on all campuses of IU judged important by experts.”
- 280,000+ audio and video items
- ~7PB over 4 years
- 9TB per day peak
- 80 different units
- 20+ different physical formats

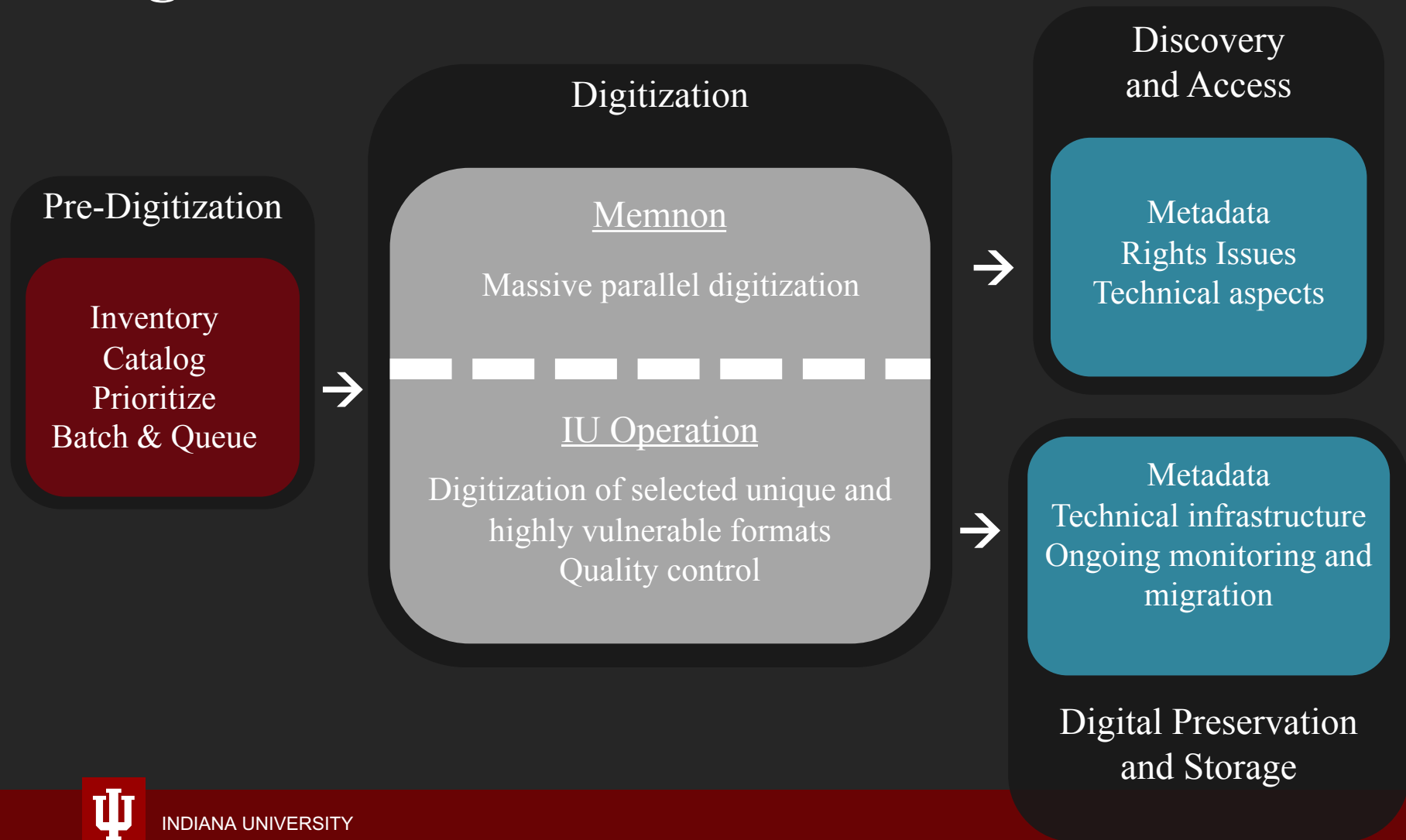


# Public-Private Partnership for Digitization

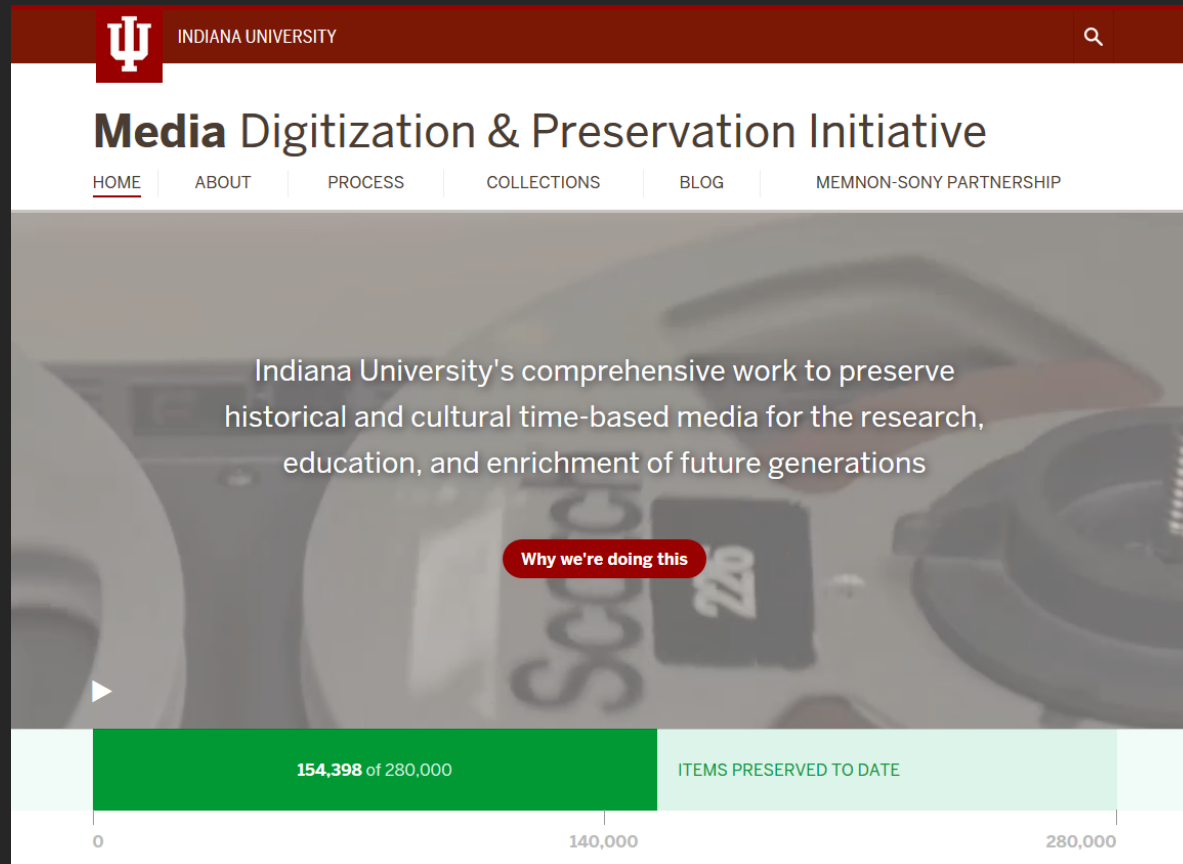
Memnon Archiving Services, A Sony Company



# Digitization and Preservation: The Phases



# Progress to Date



mdpi.iu.edu



# Many Types of Units... Some Examples:

## Libraries

- Herman B Wells Library
- Cook Music Library
- Lilly Library

## Archives

- Archives of African American Music and Culture
- Archives of Traditional Music
- Black Film Center/Archive
- IUL Moving Image Archive
- University Archives

## Museums

- Sage Costume Collection
- Mathers Museum

## Production Units

- Radio and Television Services
- Media Design and Production

## Performing Groups

- African American Arts Institute
- Department of Bands

## Academic Units

- School of Journalism
- Department of Folklore and Ethnomusicology
- Jacobs School of Music

## Research Centers and Institutes

- Kinsey Institute
- Russian and East European Institute

**Athletics!**

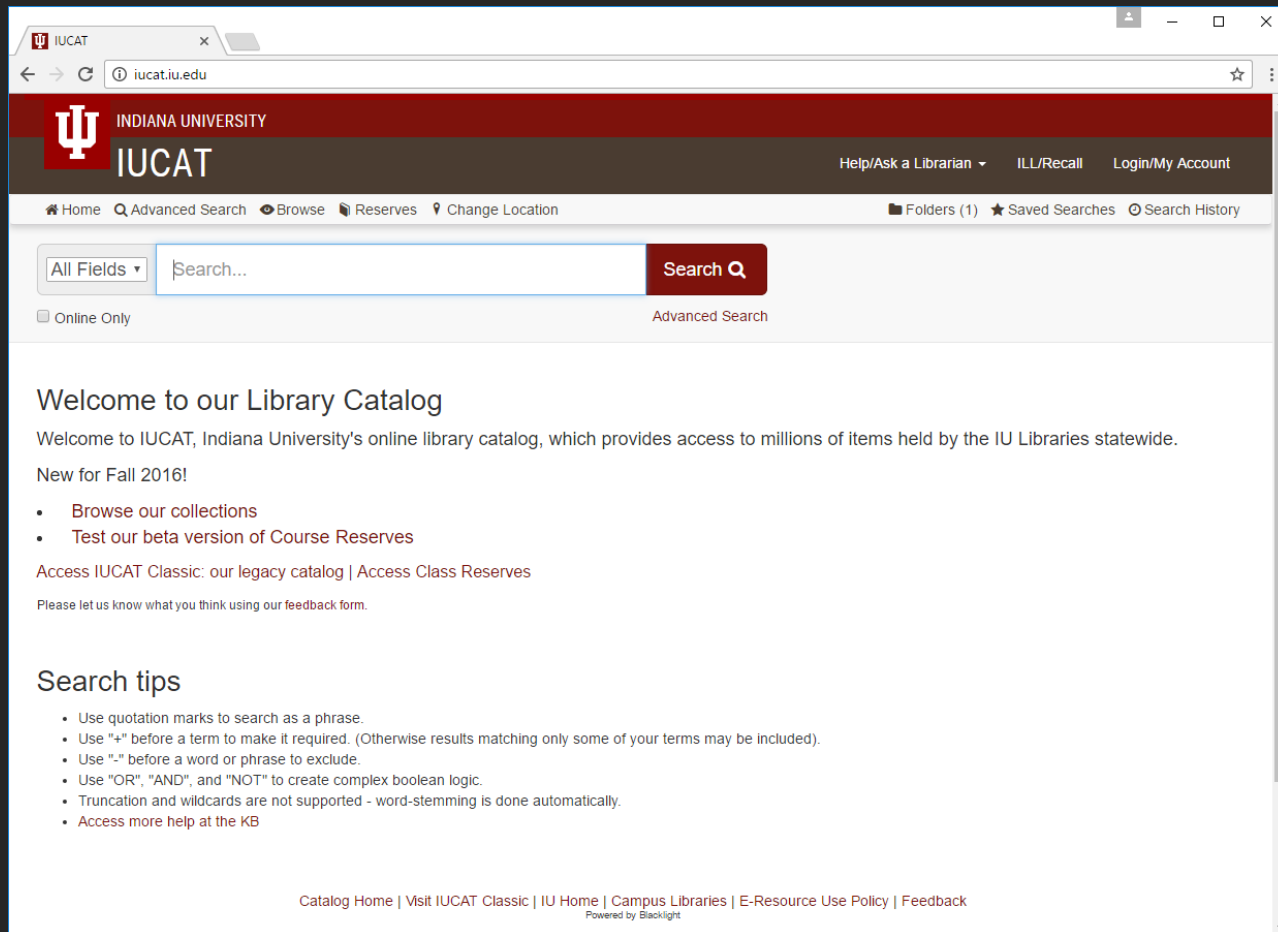


# Rights

- Goal: “make universally available”
- Many rights situations:
  - Copyright held by IU
  - Copyright held by others
  - Copyright held by others with license or deed of gift to IU
  - Public domain
  - Copyrighted orphaned work
  - Copyright status and ownership unknown
- Also, ethical and cultural considerations
- Decision trees being developed to guide rights and access determinations



# Existing metadata sources: IUCAT



The screenshot shows the IUCAT website interface. At the top, there is a red header with the Indiana University logo and the text "INDIANA UNIVERSITY IUCAT". Below the header, there is a navigation bar with links for "Home", "Advanced Search", "Browse", "Reserves", and "Change Location". On the right side of the navigation bar, there are links for "Help/Ask a Librarian", "ILL/Recall", and "Login/My Account". Below the navigation bar, there is a search bar with a dropdown menu set to "All Fields" and a "Search" button. Below the search bar, there is a checkbox for "Online Only" and a link for "Advanced Search". The main content area features a "Welcome to our Library Catalog" section, followed by a paragraph welcoming users to IUCAT and providing access to millions of items. Below this, there is a "New for Fall 2016!" section with a bulleted list of links: "Browse our collections" and "Test our beta version of Course Reserves". There is also a link for "Access IUCAT Classic: our legacy catalog | Access Class Reserves" and a link for "Please let us know what you think using our feedback form." Below this, there is a "Search tips" section with a bulleted list of search instructions: "Use quotation marks to search as a phrase.", "Use '+' before a term to make it required. (Otherwise results matching only some of your terms may be included).", "Use '-' before a word or phrase to exclude.", "Use 'OR', 'AND', and 'NOT' to create complex boolean logic.", "Truncation and wildcards are not supported - word-stemming is done automatically.", and "Access more help at the KB". At the bottom of the page, there is a footer with links for "Catalog Home", "Visit IUCAT Classic", "IU Home", "Campus Libraries", "E-Resource Use Policy", and "Feedback". Below the footer, it says "Powered by Blacklight".





# Existing metadata sources: POD

Version 1.60 User: jwd (log out)

## Media Digitization and Preservation Initiative Physical Object Database

CollectionOwner PhysicalObjects Batches Bins PickLists Statuses Returns QualityControl Reports Search

Edit Delete **Split Record** Create New Physical Object View Workflow History Edit Ephemera Status Digital Workflow

---

### Physical Object [132330]

Assignment	
Picklist	University Archives Betacam SP
Bin	Bin: 40000002330068
Box	Not Assigned
Batch	IU-0001-BSP

MDPI barcode	<input type="text" value="40000000683815"/>
Format	<input type="text" value="Betacam"/>
Has ephemera	<input type="checkbox"/>
Ephemera returned	<input type="checkbox"/>
Unit	<input type="text" value="B-ARCHIVES"/>
Title	<input type="text" value="Interviews: From John Ryan's Ora"/>
Call number	<input type="text" value="2014/001 35"/>
IUCAT barcode	<input type="text"/>
Year	<input type="text"/>
Group key	GR00100653
Group position	<input type="text" value="1"/>
Carrier stream index	GR00100653_1_1
Imported from spreadsheet	<input type="text"/>
Workflow Status	Binned >> Batched >> Shipped

### Betacam Technical Metadata

Pack Deformation	<input type="text"/>
Preservation problems	<input type="text"/>
Format Version	<input type="text" value="SP"/>
Cassette Size	<input type="text" value="large"/>
Recording Standard	<input type="text" value="NTSC"/>
Format Duration (min)	<input type="text" value="60"/>
Tape Stock Brand	<input type="text" value="Sony BCT 60MLA"/>
Image Format	<input type="text" value="4:3"/>



# Access: Avalon Media System

The screenshot displays the MDPI Internal Content Access interface. At the top, there is a navigation bar with the Indiana University logo and the text "INDIANA UNIVERSITY" and "MDPI Internal Content Access". A search bar and a "Browse" button are also present. Below the navigation bar, there are tabs for "Manage Content", "Manage Groups", and "Manage Selected Items (0)".

The main content area is titled "Browse By" and includes a list of filters on the left and a list of items on the right. The filters include "Format", "Main contributor", "Date", "Genres", "Collection", "Unit", "Language", "Published", "Created by", "External Group", and "Date Digitized".

The list of items is as follows:

Item ID	Title	Duration	Main contributors	Date	Select
1.	ITHE BRAVE BULLS! MUSIC OF THE BULL FIGHT RING LA FIESTA BRAVA	36:18	Unknown	unknown/unknown	<input type="checkbox"/> Select All <input type="checkbox"/> Select
2.	ITORERO! LA FIESTA BRAVA, VOL. 3	32:01	Unknown	unknown/unknown	<input type="checkbox"/> Select
3.	"150 Years of I.U." Optical Track 16mm/24fps Positive Transfer	31:06	Unknown	unknown/unknown	<input type="checkbox"/> Select
4.	"1928"	50:57	Olsen, George, 1893-1971.	1966 (Creation date: 1927)	<input type="checkbox"/> Select

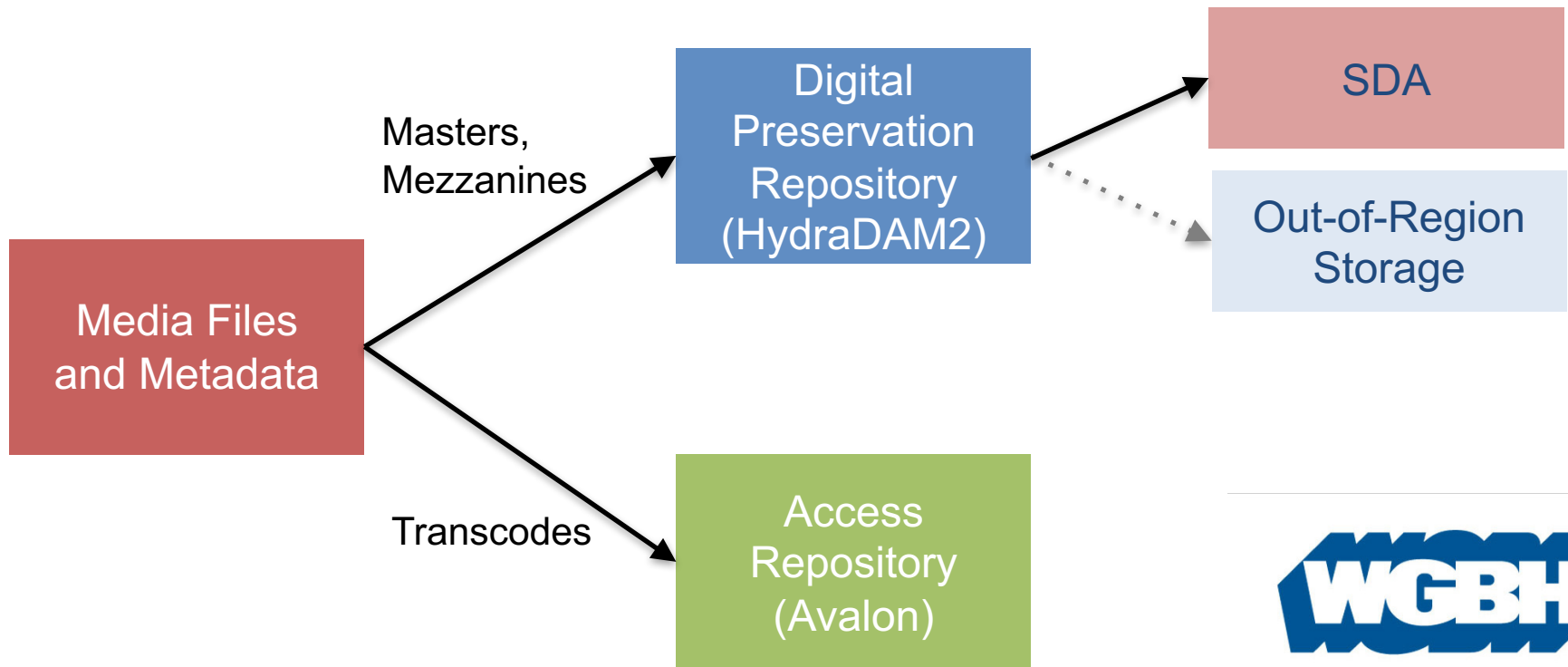


Northwestern

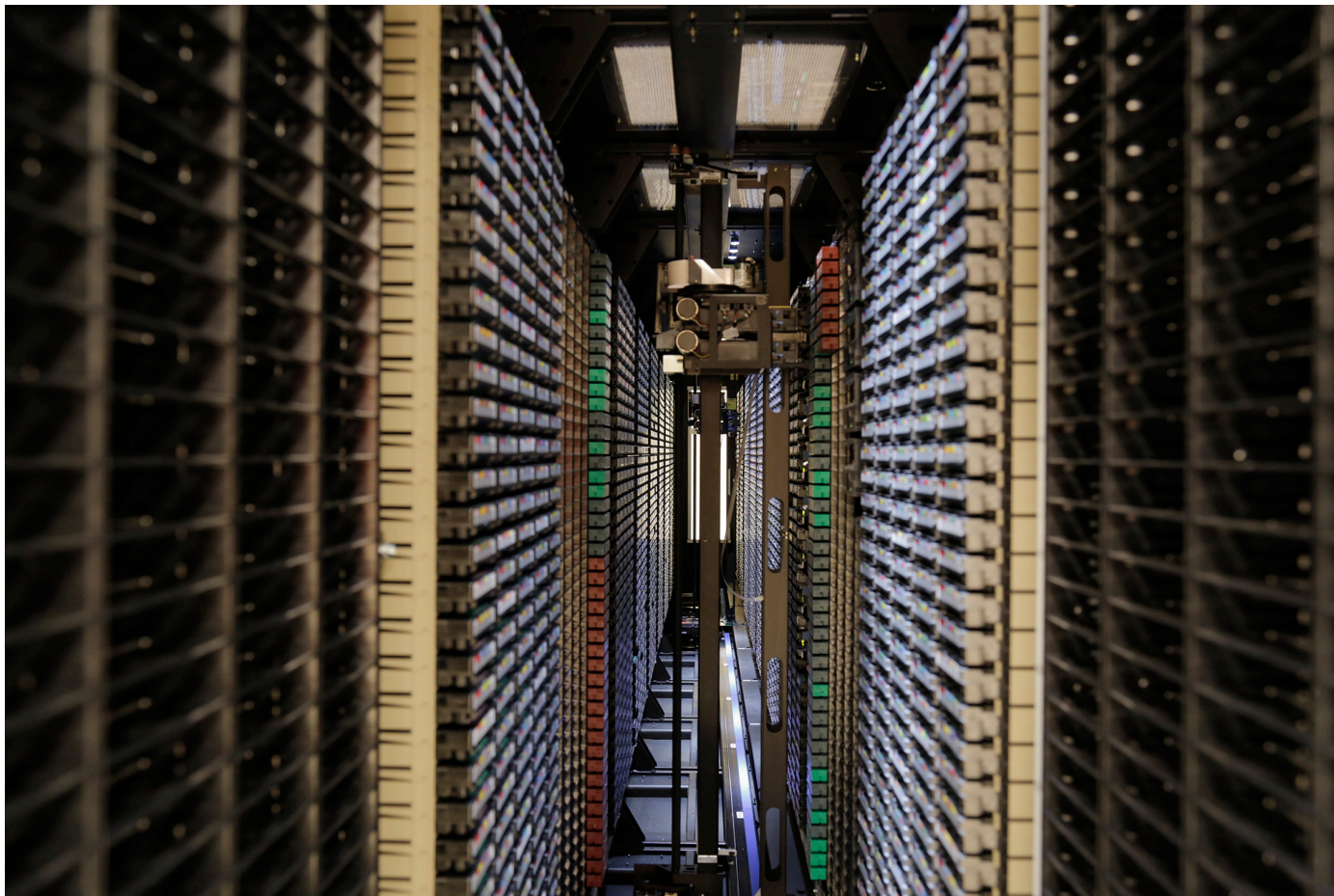


INDIANA UNIVERSITY

# Digital Preservation: HydraDAM2



# Bit Storage: Scholarly Data Archive



# Collection and Metadata Examples

Program, 1996-1997, no. 384

iuocat.iu.edu/catalog/903640

INDIANA UNIVERSITY  
IUCAT

Help/Ask a Librarian | ILL/Recall | Login/My Account

Home | Advanced Search | Browse | Reserves | Change Location | Folders (1) | Saved Searches | Search History

All Fields | Search... | Search

Online Only | Advanced Search

Start Over

## Program, 1996-1997, no. 384

**Corporate name** Indiana University Concert Orchestra.

**Title** [Program, 1996-1997, no. 384] [sound recording]

**Format** Musical Recording

**Published/Produced** 1996.

**Physical description** 1 sound cassette : digital, stereo.

**Performer** Edwin Anderson, bass trombone (1st work) ; Atar Arad, viola (3rd work) ; Indiana University Concert Orchestra ; Keith Brown, conductor.

**Recording info** Recorded on November 20, 1996, Musical Arts Center, Indiana University, Bloomington.

**Contents**

- Concerto for bass trombone, piano and strings (1996) / David Anderson (24:27)
- Symphony no. 8 in F major, op. 93 / Ludwig van Beethoven (28:08)
- Harold in Italy, op. 16 / Hector Berlioz (47:30).

**Subject** Concertos (Bass trombone with string orchestra)  
Symphonies.  
[Symphonies \(Viola with orchestra\)](#)

**Related name/work** Brown, Keith, 1933 October 21-  
Anderson, Edwin.  
Arad, Atar.

**Includes** Anderson, David, 1962- Concertos, trombone, string orchestra.  
Beethoven, Ludwig van, 1770-1827. Symphonies, no. 8, op. 93, F major.  
Berlioz, Hector, 1803-1869. Harold en Italie.

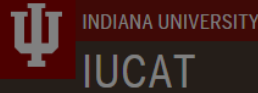
**Uniform series** Indiana University, Bloomington. School of Music. Program ; 1996-1997, no. 384.

iuocat.iu.edu/catalog?q="Symphonies+Viola+with+orchestra"&search\_field...

**Tools**

- Add to folder
- Cite
- Export to Refworks
- Export to EndNote
- Email
- Librarian View
- View Record in IUCAT Classic





All Fields Search...

Online Only

## Program, 1996-1997, no. 384

Corporate name	Indiana University
Title	[Program, 1996-1997, no. 384]
Format	Musical Recording
Published/Produced	1996.
Physical description	1 sound cassette
Performer	Edwin Anderson, David Anderson, Ludwig van Beethoven, Hector Berlioz, Keith Brown, Atar Arad, Atar Arad, Atar Arad
Recording info	Recorded on November 20, 1996, Musical Arts Center, Indiana University, Bloomington.
Contents	<ul style="list-style-type: none"> <li>Concerto for bass trombone, piano and strings (1996) / David Anderson (24:27) -- Symphony no. 8 in F major, op. 93 / Ludwig van Beethoven (28:08) -- Harold in Italy, op. 16 / Hector Berlioz (47:30)</li> </ul>
Subject	Concertos (Bass trombone with orchestra) ; Symphonies. ; Symphonies (Viola with orchestra)
Related name/work	Brown, Keith, 1933- ; Anderson, Edwin ; Arad, Atar ; Arad, Atar ; Arad, Atar
Includes	Anderson, David ; Beethoven, Ludwig van ; Berlioz, Hector ; Brown, Keith
Uniform series	Indiana University

### Librarian View

```

LEADER 00000cjm a22000005a 45 0
001 903640
008 900626s1996 xx mun? ? d
007 ss?zsnz????ed|||||||
035 a) (Sirsi)903640
035 a) (InU)AHK6526BM
035 a) (OCoLC)ocm37248636
040 a) IUL c) IUL
047 a) co a) sy
110 2 a) Indiana University Concert Orchestra. 4| prf =| ^A217613
245 0 0 a) [Program, 1996-1997, no. 384] h| [sound recording]
260 c) 1996.
300 a) 1 sound cassette : b) digital, stereo.
490 1 a) Program / Indiana University School of Music ; v| 1996-1997, no. 384
511 0 a) Edwin Anderson, bass trombone (1st work) ; Atar Arad, viola (3rd work) ; Indiana University Concert Orchestra ; Keith Brown, conductor.
518 a) Recorded on November 20, 1996, Musical Arts Center, Indiana University, Bloomington.
505 0 a) Concerto for bass trombone, piano and strings (1996) / David Anderson (24:27) -- Symphony no. 8 in F major, op. 93 / Ludwig van Beethoven (28:08) -- Harold in Italy, op. 16 / Hector Berlioz (47:30).
650 0 a) Concertos (Bass trombone with string orchestra) =| ^A2401440
650 0 a) Symphonies. =| ^A1369386
650 0 a) Symphonies (Viola with orchestra) =| ^A567292
700 1 a) Brown, Keith, dj 1933 October 21- 4| cnd =| ^A1398990
700 1 a) Anderson, Edwin. 4| prf =| ^A572053
700 1 a) Arad, Atar. 4| prf =| ^A1387083
700 1 2 a) Anderson, David, dj 1962- t| Concertos, m| trombone, string orchestra. =| ^A1402480
700 1 2 a) Beethoven, Ludwig van, dj 1770-1827. t| Symphonies, n| no. 8, op. 93, r| F major. =| ^A194782
700 1 2 a) Berlioz, Hector, dj 1803-1869. t| Harold en Italie. =| ^A204247
810 2 a) Indiana University, Bloomington. b) School of Music. t| Program ; v| 1996-1997, no. 384. =| ^A1751092
998 a) 12/2/1996 b) 7/7/1997 c) 12/2/1996
996 a) 20
999 a) DAT .I39735 96-11-20 ij 30000047962166 jj DAT .I39735 96-11-20 ij MUJUTP m| B-MUSIC p| MUJUTP s| IUPERE t| DAT w| ASIS
    
```

Tools

Add to folder

Cite

Export to Refworks

Export to EndNote

Email

Librarian View

View Record in IUCAT Classic



# MDPI Internal Content Access

Browse

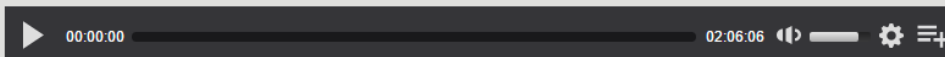
Search

Manage Content   Manage Groups   Manage Selected Items (0)   Playlists

Unpublish

Edit

Delete



Share

## [Program, 1996-1997, no. 384]

### Date

1996

### Main contributor

Indiana University Concert Orchestra.

### Contributors

Indiana University Concert Orchestra.; Brown, Keith, 1933 October 21-; Anderson, Edwin.; Arad, Atar.; Anderson, David, 1962- Concertos, trombone, string orchestra.; Beethoven, Ludwig van, 1770-1827. Symphonies, no. 8, op. 93, F major.; Berlioz, Hector, 1803-1869. Harold en Italie.

### Subjects

Concertos (Bass trombone with string orchestra); Symphonies; Symphonies (Viola with orchestra)

### Collection

William and Gayle Cook Music Library

### Unit

William and Gayle Cook Music Library

### Physical Description

1 sound cassette : digital, stereo.

### Notes

#### PERFORMERS

Edwin Anderson, bass trombone (1st work) ; Atar Arad, viola (3rd work) ; Indiana University Concert Orchestra ; Keith Brown, conductor.

#### CONTENTS

Concerto for bass trombone, piano and strings (1996) / David Anderson (24:27) -- Symphony no. 8 in F major, op. 93 / Ludwig van Beethoven (28:08) -- Harold in Italy, op. 16 / Hector Berlioz (47:30).

### Sections

#### 1. DAT 1/1 Part 1 (40000000493629) (2:06:06)

- 1. Segment 1 (1:07:45)
- 2. Segment 2 (00:36)
- 3. Segment 3 (01:10)
- 4. Segment 4 (00:46)
- 5. Segment 5 (01:03)
- 6. Segment 6 (16:47)
- 7. Segment 7 (07:41)
- 8. Segment 8 (00:29)
- 9. Segment 9 (00:28)
- 10. Segment 10 (00:17)
- 11. Segment 11 (00:14)
- 12. Segment 12 (23:36)





[Home](#)
[Advanced Search](#)
[Browse](#)
[Reserves](#)
[Change Location](#)
[Folders \(1\)](#)
[Saved Searches](#)
[Search History](#)

Online Only

[Back to Search](#)
[Start Over](#)

## Dan Burton congressional papers, 1983-2012

<p><b>Author</b> Burton, Dan, 1938-</p> <p><b>Title</b> Dan Burton congressional papers, 1983-2012.</p> <p><b>Format</b> Mixed Materials</p> <p><b>Description</b> 123 linear feet a (123 boxes) video and audio 1049 tapes electronic records 6.97 gigabytes</p> <p><b>URL</b> &lt;Finding aid for collection&gt; <a href="http://purl.dlib.indiana.edu/iudl/findingaids/politicalpapers/VAD2039">http://purl.dlib.indiana.edu/iudl/findingaids/politicalpapers/VAD2039</a></p> <p><b>Variant title</b> Burton papers</p> <p><b>Notes</b> Select files closed to researchers. Advance notice is required for access to the collection. Danny Lee Burton (b. 1938) represented Indiana in the United States House of Representatives from 1983-2012. Republican Dan Burton was elected to represent the 5th and 6th congressional districts of Indiana throughout his time in Congress. Materials are in English.</p> <p><b>Abstract</b> The collection consists of papers, audio-visual materials, and electronic records generated and received by the office of Congressman Dan Burton.</p> <p><b>Subject headings</b> Burton, Dan, 1938---Archives. Burton, Dan, 1938---Correspondence. United States. Congress--Records and correspondence. United States. Congress. House. Committee on Foreign Affairs--Records and correspondence. United States. Congress. House. Committee on Government Reform and Oversight--Records and correspondence. Legislators--Indiana--History--20th century--Sources. Legislators--Indiana--History--21st century--Sources.</p>	<input type="button" value="Request This"/>
--	---

**Tools**

[Export to Refworks](#)

[Export to EndNote](#)

[Email](#)

[Librarian View](#)

[View Record in IUCAT Classic](#)



# Archives Online

at Indiana University



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#### View options:

- [Standard](#)
- [Entire document](#)
- [Printer-friendly](#)
- [XML](#)

#### Search within this document:

#### Contents:

##### Summary Information

[Access Restrictions](#)

[Usage Restrictions](#)

[Biographical Note](#)

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[Annual Constituent Survey, 2006](#)

[District Constituent Mail Drafts \(Electronic Records\), 2005-2012](#)

[Grants and Projects \(Electronic Records\), 2012](#)

[Letters Uploaded to Capcorr \(Electronic Records\), 2005-2012](#)

[Mailers, 2000-2012](#)

[Foreign Affairs Committee Files, 1983-2012](#)

[General, 1983-2012](#)

[Europe and Eurasia \(Sub-Series Restricted\)](#)

[International Economic Policy and Trade](#)

## Dan Burton Congressional Papers, 1983-2012

A Guide to his Papers in the Modern Political Papers Collection of the Indiana University Libraries.

Finding aid prepared by Hope Grebner and Nicole Bieganski, Project Archivists

### Summary Information

#### Repository

Modern Political Papers Collection, Indiana University Libraries

Herman B Wells Library E460

1320 East Tenth Street

Bloomington, IN 47405-7000

Phone: 812-856-4601

Email: [congpprs@indiana.edu](mailto:congpprs@indiana.edu)

<http://www.libraries.iub.edu/modern-political-papers>

#### Creator

Burton, Dan, 1938-

#### Title

Dan Burton Congressional Papers, 1983-2012

#### Collection No.

MPP 21

#### Extent

123 linear feet (123 cartons), 1049 video and audio tapes, and 6.97 gigabytes of electronic records

#### Language

Materials are in English.

#### Abstract

Danny Lee Burton (b. 1938) represented Indiana in the United States House of Representatives from 1983-2012. Republican Dan Burton was elected to represent the 5th and 6th congressional districts of Indiana throughout his time in Congress. The collection consists of papers, audio-visual materials, and electronic records generated and received by the office of Congressman Dan Burton.

#### Access Restrictions

This collection is open for research, with the exception of the unpublished records of the House of Representatives Committees on Government Reform and Oversight and Foreign Affairs (formerly the Committee on International Relations). Select files from these series may be available to researchers after review by political papers archivists.

	Frontline Special (VHS), Oct 6 1998
	Sunday Morning Shows NBC Meet the Press, McLaughlin (VHS), Nov 18 1998
	Crossfire (VHS), Dec 1 1998
Box 96	ABC Nightly News, O'Reilly Factor - Monica Lewinsky and Other General News (VHS), 1999
	Open 30 Seconds, Close 30 Seconds (Betacam SP), Feb 23 1999
	NBC - Fleecing of America: Housing/HUD Story (3:30) (VHS), Feb 25 1999
	Dateline - Juanita Broaderick (VHS), Mar 1999
	Oprah - Child/Men Abuse Women (VHS), Mar 1 1999
	O'Reilly Factor (VHS), Mar 16 1999
	O'Reilly Factor (VHS), Mar 16 1999
	Representative Dan Burton with Representative Stephen Horn (28:54) (Betacam SP), Mar 24 1999
	<del>Representative Dan Burton with Representative Stephen Horn (28:54) (VHS), Mar 24 1999</del>
	Fox News - Carl Cameron Report on Chinese Espionage and Campaign Funds (VHS), Apr 8 1999
	Yugoslavia - Death of a Nation (VHS), Apr 9 1999
	Representative Dan Burton Guest Jane Seymour VR#17 (29:33) (VHS), Apr 19 1999
	Representative Dan Burton Guest Stephen Horn Recorded Mar 24 1999 VR#12 (28:54) (VHS), Apr 19 1999
	Representative Dan Burton Guest Jane Seymour VR #16 (29:33) (VHS), Apr 19 1999
	Representative Burton with Governor Tommy Thompson VR#15 (30:30) (VHS), Apr 22 1999
	Representative Dan Burton Two Promos Each 30 Seconds 1st Promo with Pete Sessions 2nd with Tommy Thompson VR#18 (:60) (VHS), Apr 26 1999
	Evening News - Chung, ABC, CBS, NBC, Lehrer (VHS), May 11 1999
	Moneyline - Chung (VHS), May 11 1999
	House Committee Hearing - Chung (Tape 1 of 3) (VHS), May 11 1999
	House Committee Hearing - Chung (Tape 2 of 3) (VHS), May 11 1999
	House Committee Hearing - Chung (Tape 3 of 3) (VHS), May 11 1999



Rep. Dan Burton w/ Rep. S... X +

https://content.mdpi.iu.edu/media\_objects/avalon:283525


INDIANA UNIVERSITY jwd | Sign out

# MDPI Internal Content Access

Browse Search

Manage Content Manage Groups Manage Selected Items (0) Playlists

Unpublish Edit Delete



Rep. Dan Burton w/ Rep. Stephen Horn 3/24/99

**Date**  
unknown/unknown

**Main contributor**  
Unknown

**Collection**  
Office of University Archives and Records Management

**Unit**  
Office of University Archives and Records Management

**Other Identifier**  
Other: GR00157239

View Raw Metadata View Fedora Objects


02:38 31:33

Share

Sections


- 1. Betacam 1/1 Part 1 (40000000559635) (31:33)
- 1. Segment 1 (00:38)
- 2. Segment 2 (28:53)



All Fields ▾ Search... Search   
 Online Only Advanced Search

[Back to Search](#) [Start Over](#)

## Colombia, Atlántico, Bolívar, Córdoba and Magdalena, 1965

- Author/Composer, etc** List, George, 1911-2008.
- Format**  Non Musical Recording
- Title** [Colombia, Atlántico, Bolívar, Córdoba and Magdalena, 1965] [sound recording] / collected by George List.
- Physical description** 30 sound tape reels : analog, 7 1/2 ips, full track ; 7 in. + slides and documentation.  
11 sound tape reels : analog, 3 3/4 ips, full track ; 10 in.
- Language** Sung and spoken in Spanish.
- Performer** Various native informants and musicians.
- Recording info** Recorded by List from February 19-April 6, 1965 in the Departamentos de Atlántico, Bolívar, Córdoba, and Magdalena.
- Notes** Interviews, tales and folk music.  
Accompanied by a complete catalog of the tapes in Spanish with some English translations, and biographical information on the performers and informants.
- Local note** Slides housed in slide file cabinet in vault.  
OT 12259--12299; EC 7" 9874--9903; EC 10" 2250--2260; EC 2670--2717 (old)
- Summary** Interviews with musicians concerning various musical genres, instruments, velorios for children, folktales and prayers. Includes demonstrations of musical instruments and performances by various musical groups.
- Terms of use** Archival use and reproduction for non-profit educational or research purposes; Archives of Traditional Music.
- Subject** Folk music--Colombia.  
Tales--Colombia.  
Funeral rites and ceremonies--Colombia.

**Tools**

Add to folder ▾

Cite ▾

[Export to Refworks](#)

[Export to EndNote](#)

[Email](#)

[Librarian View](#)

[View Record in IUCAT Classic](#)

**Indiana University  
Archives of Traditional Music  
INDEX**

68-063-F  
Page 1 of 31

**Collection title:** Colombia. George List, 1965.

---

<b>shelf no. / item no.</b>	<b>duration</b>	<b>description</b>
OT 12259		Collector's tape no. List 45. Cartagena, 3/08/1965. Hotel San Felipe. Sesión de grabación con el grupo "Gaiteros de San Jacinto".
01	4:05	"Vicente se fue a bañar" (Juan Lara). Porro. Ensamble completo: gaita hembra, gaita macho con maraca, tambor mayor y tambor llamador.
02	0:42	Prueba. "Juanita" (tradicional). Porro. Ensamble completo.
03	3:32	Prueba. "Juanita" (tradicional). Porro. Ensamble completo.
04	8:20	Prueba. "Juanita" (tradicional). Porro. Solo las dos gaitas, sin percusión.
05	3:12	"Las cinco notas" (Juan Lara). Porro. Ensamble completo.
06	1:27	Conversación sobre cuando se usa letra en la canciones.
07	2:02	"Las cinco notas" (Juan Lara). Porro. Solo las dos gaitas, sin percusión.
08	0:24	"Las cinco notas" (Juan Lara). Porro. Solo gaita macho.
09	3:15	Conversación sobre el nombre de la canción.
10	1:53	Conversación sobre el compositor de las tres canciones que se tocaron.



# Media Digitization and Preservation Initiative

# Physical Object Database

CollectionOwner PhysicalObjects Batches Bins PickLists Statuses Returns QualityControl Reports Search

Edit Delete **Split Record** Create New Physical Object View Workflow History Edit Ephemera Status Digital Workflow

## Physical Object [138450]

Assignment	
Picklist	RTVS Betacam SP
Bin	Bin: 4000000003378
Box	Not Assigned
Batch	M-0004-BSP

MDPI barcode	<input type="text" value="4000000784936"/>
Format	<input type="text" value="Betacam"/>
Has ephemera	<input type="checkbox"/>
Ephemera returned	<input type="checkbox"/>
Unit	<input type="text" value="B-RTVS"/>
Title	<input type="text" value="A Conversation with Herman B W"/>
Call number	<input type="text"/>
IUCAT barcode	<input type="text"/>
Year	<input type="text"/>
Group key	GR00106221
Group position	<input type="text" value="1"/>
Carrier stream index	GR00106221_1_1
Imported from spreadsheet	<input type="text"/>
Workflow Status	Unpacked

General Note	
Include in Shipping Manifest	<input type="checkbox"/>
Notes	<input type="text" value="dub of one inch #1356 apx. 29 mins"/>

## Betacam Technical Metadata

Pack Deformation	<input type="text"/>
Preservation problems	<input type="text"/>
Format Version	<input type="text" value="SP"/>
Cassette Size	<input type="text" value="small"/>
Recording Standard	<input type="text" value="NTSC"/>
Format Duration (min)	<input type="text" value="30"/>
Tape Stock Brand	<input type="text" value="3M"/>
Image Format	<input type="text" value="4:3"/>





[Unpublish](#) [Edit](#) [Delete](#)



## "A Conversation with Herman B Wells"

**Date**  
unknown/unknown

**Main contributor**  
Unknown

**Collection**  
Radio and Television Services

**Unit**  
Radio and Television Services

**Other Identifier**  
Other: GR00106221

[View Raw Metadata](#)

[View Fedora Objects](#)

### Sections

1. Betacam 1/1 Part 1 (40000000784936) (31:10)

1. Segment 1 (00:31)

2. Segment 2 (00:18)

3. Segment 3 (28:42)





# Hours

280k



Media  
Content  
Description

# Core Principles

- ~~Technological Heroism~~
- Human Assisted Computing
- People First
- Phased and Iterative
- Service Oriented Architecture

# Methodology



+



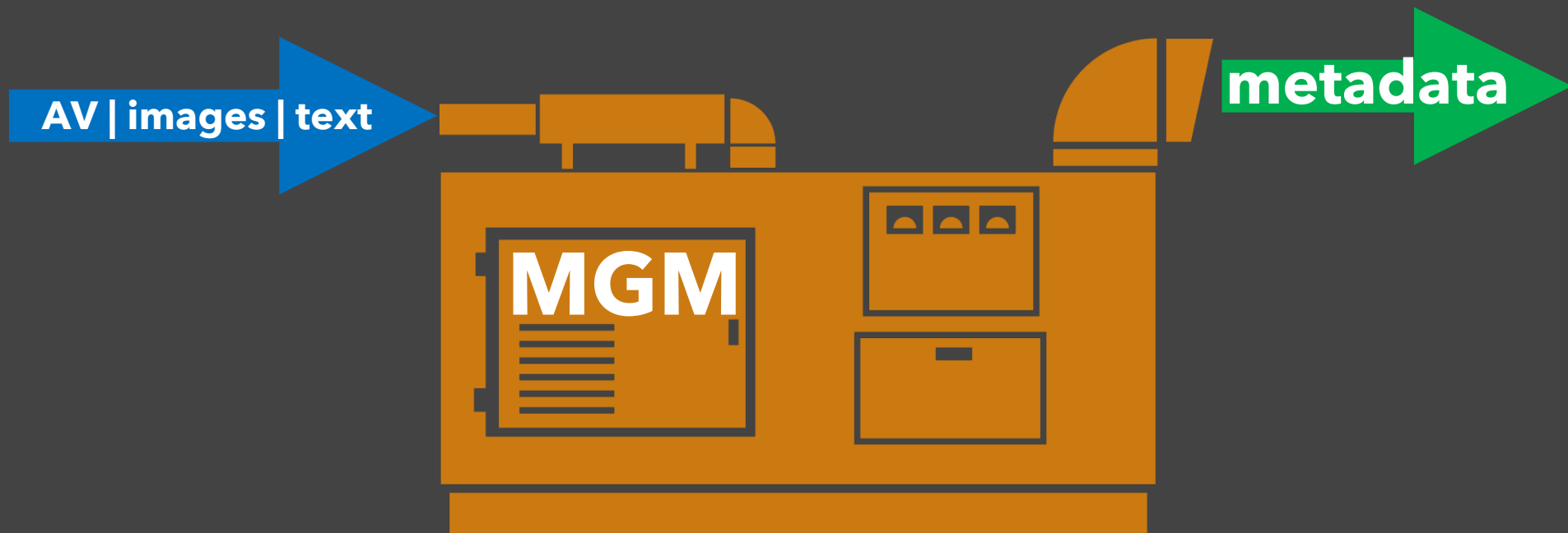


Applied permission  
Applied perm note  
Collection  
\*Date created  
\*Default  
permissions  
\*Department/Unit  
Duration  
Full text  
Geographic  
Identifiers  
Links &  
relationships  
\*MDPI barcode  
Music/Speech  
\*Names

Notes  
Parts/components  
Physical description  
\*Publication status  
Relationship  
\*Rights holder  
\*Rights status  
\*Role (for names)  
Sound/silent  
Source  
Subjects  
Target audience  
\*Title  
Type of Resource  
Type of title  
Year of renewal

Date other  
Event  
Geographic other  
Keywords  
Language  
Publisher  
Beats per minute  
Color info  
Color/B&W  
Ethnicity  
Frequency info  
Gender  
Genre  
Music present

# Metadata Generation Mechanisms



# Phase One MGMs

Commercial content ID  
Human generation  
Human transcription  
Legacy closed caption  
Legacy date & timecode  
Memnon output  
Music vs speech detection  
Queried/Imported data  
Segmentation  
Shipping manifest (POD)  
Silence detection  
Tech-embedded metadata

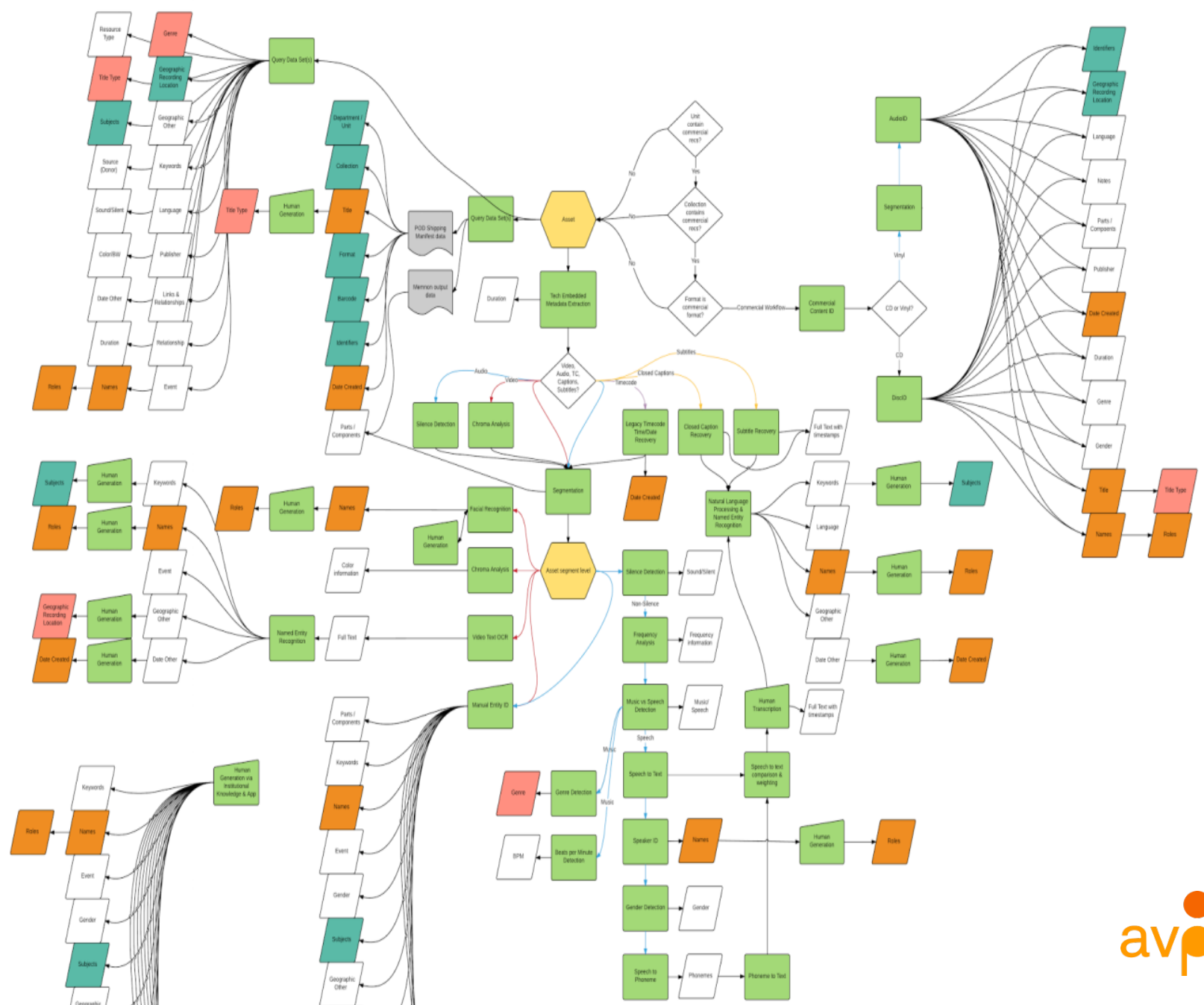
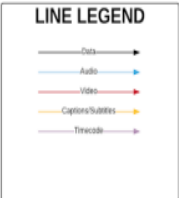
# Phase Two MGMs

Facial recognition  
Linked data  
Named entity  
recognition  
Natural language  
processing  
Paper & video OCR  
Phoneme analysis  
Speech to text  
Subtitle recovery  
Speech-to-text  
comparison &  
weighting

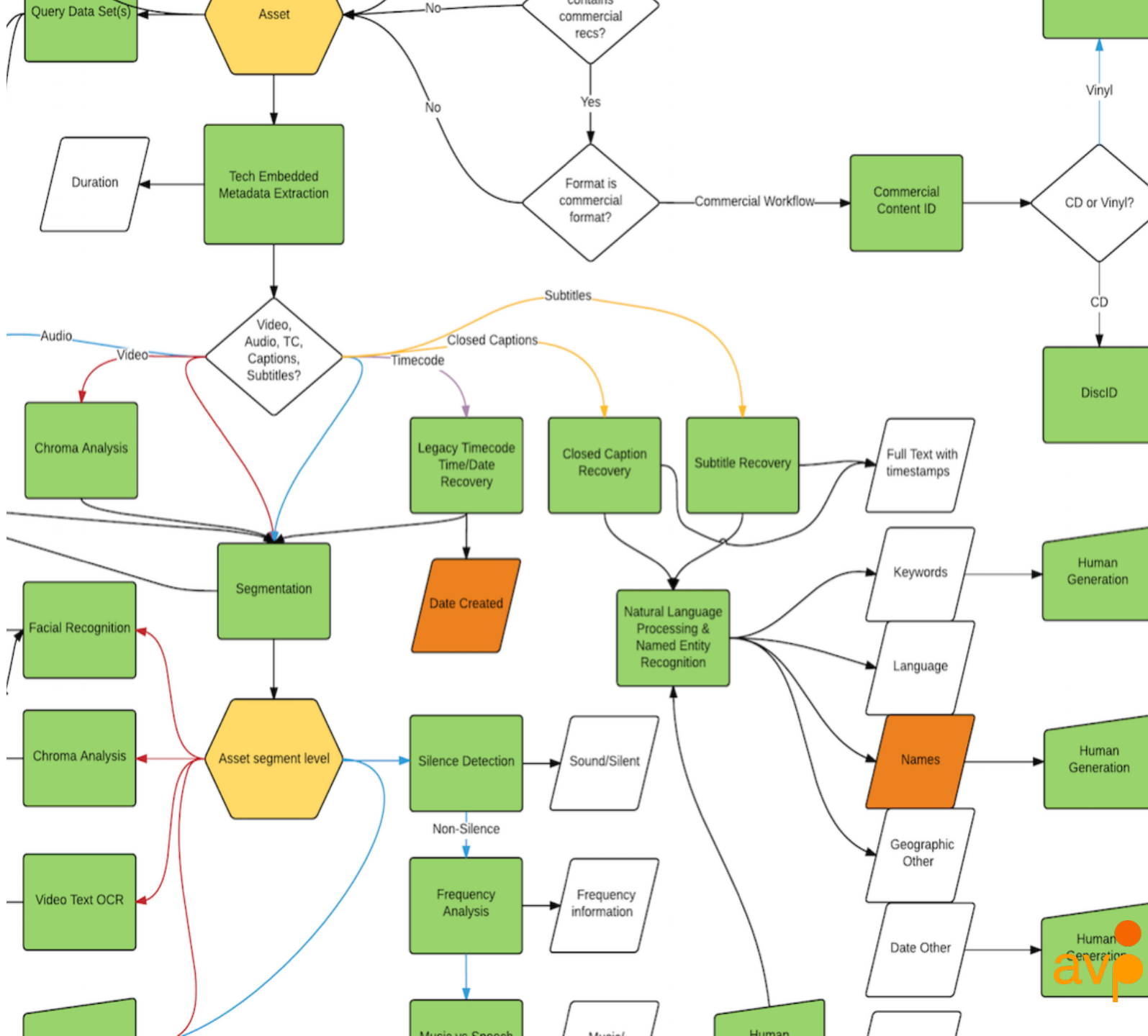
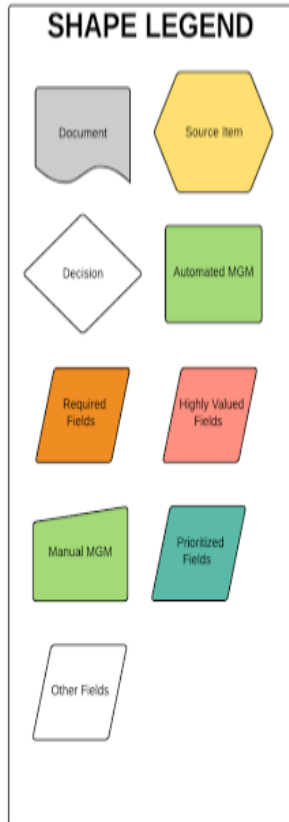
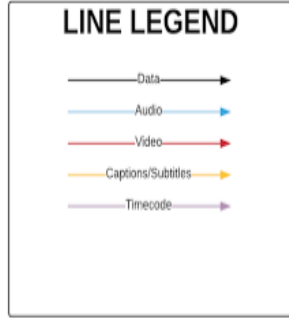
# Phase Three MGMs

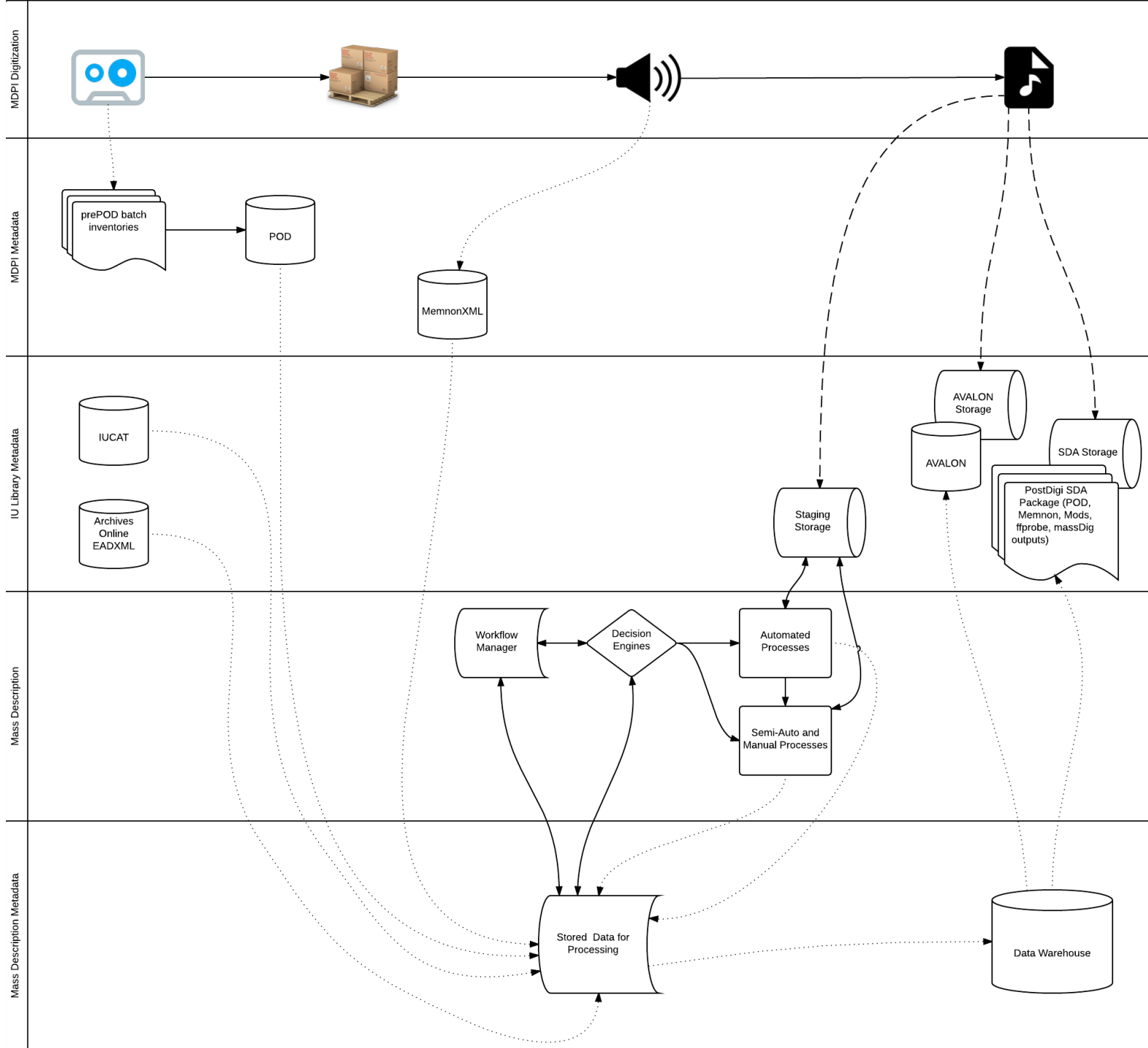
Artificial intelligence  
Audio frequency  
analysis  
Beats per minute  
detection  
Chroma analysis  
Content matching  
Genre detection  
Speaker  
identification

**DOCUMENT INFO**  
 Indiana University Metadata Strategy  
 Project  
 Metadata Generation Process and  
 Outputs  
 Review Draft | 2016-03-07  
 AV Metadata









# Phase One

- 1) Staffing & Training
- 1) SMART team embed
- 2) Acquire/Develop & implement core infrastructure & MGMs
- 3) Rights analysis
- 4) Associated materials
- 5) Phase 2 Prep

- Required & prioritized
- Manual
- Low hanging fruit

# Phase Two

- 1) Develop/Acquire & implement phase 2 MGMs
- 2) Additional system dev
- 3) Phase 3 prep

- Semi/Automated
- Time-based MD
- Linked data

# Phase Three

- 1) Develop/Acquire & implement phase 3 MGMs
- 2) Additional system dev
- 3) Focus on AI

- Synthesized/AI
- Specialized/  
Domain specific

# Without the Project

The screenshot shows a web browser window with the following elements:

- Browser Address Bar:** [https://content.mdpi.iu.edu/media\\_objects/avalon:250803](https://content.mdpi.iu.edu/media_objects/avalon:250803)
- Page Header:** INDIANA UNIVERSITY logo and "MDPI Internal Content Access" title. A search bar and "Browse" button are also present.
- Navigation:** "Manage Content", "Manage Groups", "Manage Selected Items (0)", and "Playlists" links.
- Video Player:** A video player showing a man speaking. The video title is "A Conversation with Herman B Wells". The player includes a play button, a progress bar (21:45 / 31:10), and a "Share" button.
- Metadata:** A sidebar on the right lists details: Date (unknown/unknown), Main contributor (Unknown), Collection (Radio and Television Services), Unit (Radio and Television Services), and Other Identifier (GR00106221). Buttons for "View Raw Metadata" and "View Fedora Objects" are also present.
- Sections:** A list of video segments: "1. Betacam 1/1 Part 1 (40000000784936) (31:10)", "1. Segment 1 (00:31)", "2. Segment 2 (00:18)", and "3. Segment 3 (28:42)".

# Possible Searches

- "Wells"
- "Radio and Television Services Collection"

# Phase One

**Title** – A Conversation with HB Wells

**Title (Type of Title – Alternative)** –  
A Conversation with Herman B. Wells

**Collection** – Radio and Television  
Services

**Department/Unit** – Radio and  
Television Services

**Physical Description** – Betacam

**Duration** – 31:07

**MDPI Barcode** – 40000000784944

**Type of Resource** – moving image

**Date Created** – 1970/1979

**Music/speech** – Speech

**Sound/silent** – Sound

**Subjects** –

Indiana University  
(<http://id.loc.gov/authorities/names/n80126369>)

Universities and colleges—United  
States—Administration  
(<http://id.loc.gov/authorities/subjects/h85141150>)

Universities and colleges—United  
States—History—20<sup>th</sup> century  
(<http://id.loc.gov/authorities/subjects/h2010117482>)

Wells, Herman B.  
(<http://id.loc.gov/authorities/names/n81012520>)

# Phase One

## **Names** –

Mundt, Bruce (Producer)

Petranoff, Robert (Producer)

Office of University Relations  
(Production company)

Wells, Herman B. (Interviewee)

Clark, Thomas D. (Interviewer)

WTIU Bloomington (Production place)

**Geographic (Recording location)** –  
United States

**Parts/components** – 1 of 1

**Notes** – Betacam is transfer from film original based on film leader at start of content. Date range is based on main library building being complete and having electricity.

**Rights holder** – Indiana University

**Rights status** – In Copyright

**Year of Renewal** – 2067

**Publication status** – Unpublished

**Applied permissions** – Campus only

**Default permissions** – Campus only

# Phase One Search

- Unpublished videos
- Produced by Radio and TV
- Audio type speech
- Herman B. Wells is interviewee
- IU is rights holder



# Phase Two (Additional)

**Language** – English

**Keywords** –

Board of Trustees

Faculty

University administration

University president

Music

Arts

Midwest universities

President's spouses

20<sup>th</sup>-century leaders

**Names** –

Bryan, William Lowe

Kinsey, Alfred

Roosevelt, Eleanor

Rockefeller Foundation

**Date other** – 1940/1970

**Full Text**

OCR from text within video

Speech to Text

**Geographic other**

Bloomington

(<http://www.geonames.org/4254679>)

Indiana

(<http://www.geonames.org/4921868>)



# Phase Two Search

- Every place within the video
- Face of Herman B. Wells appears
- "Eleanor Roosevelt" exists in text

# Phase Three (Additional)

**Color/bw** – Color

**Color Information** – [time stamp and values representing predominant colors being represented]

**Music present** – [time stamp at points at which music is present]

**Genre** – Interview

**Speaker Identification** – [time stamp and name each time a speaker changes, combined with the names field]

**Relation** – [Content matching will identify where any portions of content in this video also exist in any portions of videos within the repository]

# Phase Three Searches

- All repository content with any portions of the audio or video in this video
- Information for each piece of commercial music





# Encompassed in Budget

Existing Staff Hours

Avalon Dev

Human Generation MGMs

Workflow System Dev

Query and Import Hours

RMS Dev

SMART Assessment Hours

Consulting

MGM Products & Services

Scanning & Imaging Costs

MGM Dev

Hardware Costs



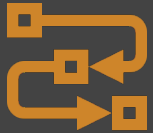
# Cost Per Item (All In)

Phase 1	Phase 2	Phase 3	Total
\$16.26	\$12.58	\$4.07	\$32.91

# A Few Takeaways



Organizational effort and preparation



Segmentation vs timestamping



Lower than anticipated costs



# Next Steps

1. Access Workflows task force formed
  - Develop workflows for items/collections with good metadata and clear rights
2. Continued internal messaging
  - Digitization ≠ access
3. Longer-term planning
  - Implementation plan and budget for full metadata project
  - Development of platform for workflow engine / data warehouse
  - Grant funding, collaborators?



# Questions?

- [mdpi.iu.edu](http://mdpi.iu.edu)
- [avpreserve.com](http://avpreserve.com)
  
- [jwd@iu.edu](mailto:jwd@iu.edu)
- [chris@avpreserve.com](mailto:chris@avpreserve.com)

