

# Avalon Media System Demonstration and Roadmap

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Hydra Connect 2015  
September 22, 2015

# What is Avalon?

- Hydra Solution Bundle for audio/video access
- Goals:
  - Easily installable and configurable
  - Serve a variety of use cases and institutions
  - Create a basis for sustainable development

# Why Avalon?

- Existing repository systems don't work well for time-based media
  - DSpace, Fedora, Digital Commons, ContentDM, ...
  - Issues: integration with streaming servers; hard to support time-based navigation; difficulties in integrating access control
- Existing media systems don't work well with repositories
  - Kaltura, Brightcove, Ensemble, ShareStream, ...
  - Issues: focus on short-term access for teaching and learning; limited metadata and access control capabilities; integration with preservation workflows

# Project Funding

- 2011-2015: National Leadership Grant from the Institute of Museum and Library Services
- 2015-2016: Andrew W. Mellon Foundation
- Partnership between libraries at Indiana University and Northwestern University

# Project Partners and Advisors



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NORTHWESTERN  
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NEW YORK UNIVERSITY



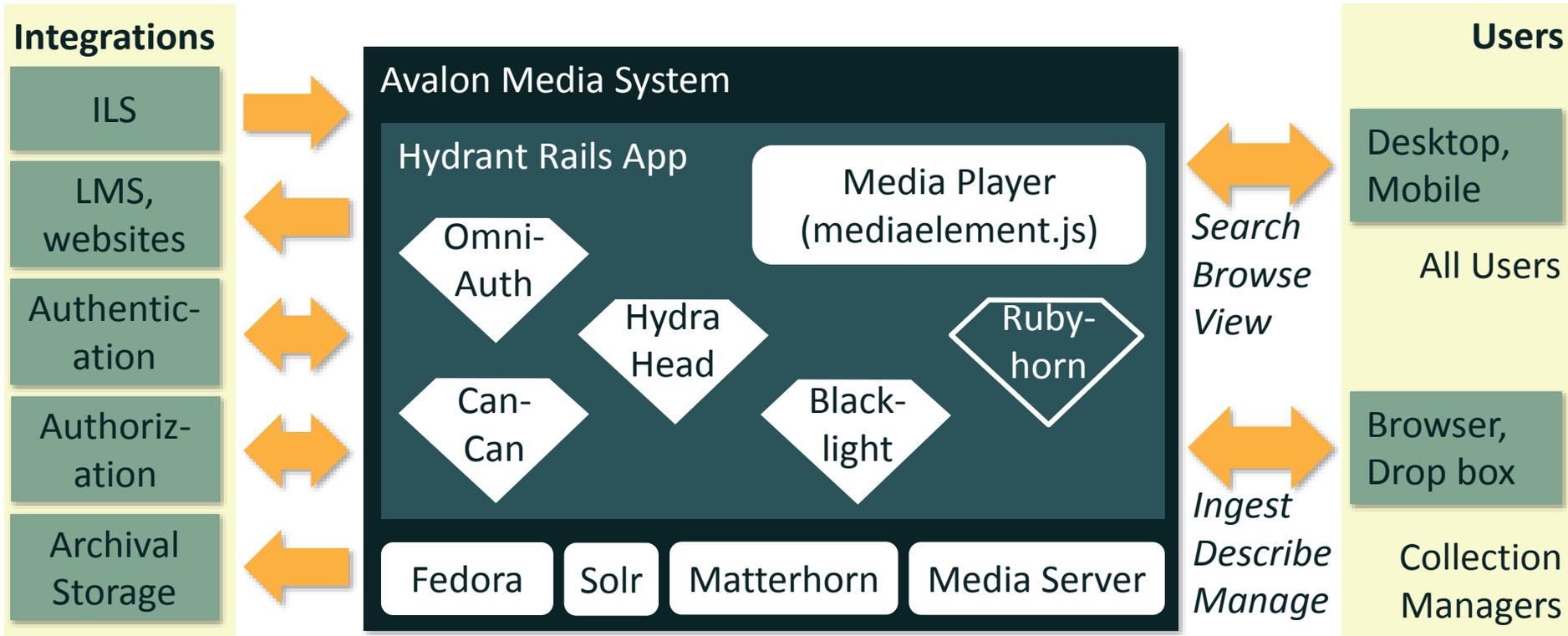
STANFORD  
UNIVERSITY



THE UNIVERSITY *of York*

avalon  
MEDIA SYSTEM

# Avalon Architecture



- Avalon code – consists of Hydrant Rails App and the Rubyhorn gem. Other pieces are leveraged.

# Release History

- 0.1 – July 2012
- 0.5 – October 2012
- 1.0 – May 2013
- 2.0 – October 2013
- 3.0 – May 2014
- 3.1 – July 2014
- 3.2 – January 2015
- 3.3 – March 2015
- 4.0 – September 2015

# Current Use Cases

- Video e-reserves
- Hosting of licensed educational video content
- Access to archival audio, video, film collections
- Access to teaching collections
- Mass digitization

# Faceted browse via Blacklight

The screenshot displays the Avalon Media System interface. At the top, the logo "avalon MEDIA SYSTEM" is visible on the left, and a user profile "jwt" with a "Sign out" button is on the right. Below the header, there are navigation tabs: "Browse", "Manage Content", and "Manage Groups". A search bar is located on the right side of this navigation area.

The main content area is divided into two columns. The left column contains faceted browsing options under two sections: "Browse by" and "Limit to".

- Browse by:**
  - Format: Moving Image (31)
  - Date
  - Genres
  - Collection
  - Unit
- Limit to:**
  - Published
  - Created by

The right column shows the search results. At the top, it indicates "You searched for Format > Moving Image" with a "Start Over" button. Below this, there are navigation controls: "« Previous | 1 - 10 of 31 | Next »", "10 per page", and "Sort by Relevance".

The search results are listed as follows:

- 1. avalon:1246 (00:29)**  

- 2. avalon:1335 (00:06)**  

- 3. Fête (Excerpt) (01:03)**  


Main contributors: Langlais, Jean, 1907-1991  
Date: 2010  
Summary: Recorded on May 2, 2010, Auer Concert Hall, Indiana University, Bloomington.
- 4. Bibliotecarios Friendly (00:40)**  


Main contributors: Vero ; Ramiro, Laura

# Desktop/Mobile Player

The screenshot displays the Avalon Media System interface. At the top left is the 'avalon MEDIA SYSTEM' logo. A 'Browse' button is on the left, and a search bar is on the right. The main content area features a video player on the left and a metadata sidebar on the right. The video player shows a man playing an organ, with a play button overlay and a progress bar at the bottom. The video title is 'Seward Organ Dedication April 30 2010'. Below the video are 'Share this resource' and 'Embed' buttons. The metadata sidebar lists details for 'Fête (Excerpt)', including the main contributor (Jean Langlais), date (2010), summary (recording at Auer Concert Hall), contributor (Christopher C. Young), publisher (William and Gayle Cook Music Library), subject (Organ music), collection (Sample Collection), and unit (Default Unit).

avalon  
MEDIA SYSTEM

Browse Search

Fête (Excerpt)

**Main contributor**  
Langlais, Jean, 1907-1991

**Date**  
2010

**Summary**  
Recorded on May 2, 2010, Auer Concert Hall, Indiana University, Bloomington.

**Contributor**  
Young, Christopher C. (Christopher Clark)

**Publisher**  
William and Gayle Cook Music Library

**Subject**  
Organ music

**Collection**  
Sample Collection

**Unit**  
Default Unit

Seward Organ Dedication April 30 2010

00:03 01:03

Share this resource Embed

Copy the link below to share this resource

**Item**  
[https://pawpaw.dlib.indiana.edu:443/media\\_objects/avalon:](https://pawpaw.dlib.indiana.edu:443/media_objects/avalon:)

**Section**  
[https://pawpaw.dlib.indiana.edu:443/media\\_objects/avalon:](https://pawpaw.dlib.indiana.edu:443/media_objects/avalon:)

# Embedding



» [Indiana University Libraries Moving Image Archive](#)

» [IU Audio-Visual Center Exhibit](#)

» [WWII Exhibit](#)

» [Browse Collections](#)

» [Browse Items](#)

» [IU Libraries Moving Image Archive Blog](#)

 +

## Control Center



[About this item](#)

# Learning Tools Interoperability

canvas Courses ▾ Grades Calendar

Julie Rudder Inbox Settings Logout Help

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SBX\_MEDIA ⌕ > SBX\_MEDIA

Home Announcements Assignments Discussions Conferences Course Reserves Library Media Modules Collaborations Files Quizzes Outcomes Syllabus Grades People Pages Settings

j-rudder@northwestern.edu | Sign out | Help

## Repository | audio + video

[Click to Open Audio/Video Repository in a New Window](#)

# Learning Tools Interoperability

Repository | audio + video

Browse Media in Canvas

Search

## Browse by

### Format

Moving Image (2)

Sound Recording (1)

### Date

### Genres

### Collection

### Unit

You searched for External Group > Media in Canvas x

Start Over

1 - 3 of 3

10 per page

Sort by Relevance

### 1. Marching Band, 1957 (16:31)



Main contributors: Northwestern University

Date: 1957

### 2. Clarinet Master Class 1990-06-21 (2:09:02)



Main contributors: Brody, Clark; Marcellus, Robert; Smith, Gregory

Date: 1990-06-21

Summary: 1. Mock auditions with Robert Marcellus, Clark Brody, and Gregory Smith with excerpts from Beethoven "Symphony No. 4," Brahms "Symphony No. 3," and Rimsky-Korsakov "Capriccio Espagnol" 2. Mock au...

### 3. Northwestern Football practice, 1971 (22:39)



Main contributors: Northwestern University (Evanston, Ill.)

# Manage Content

Collections - Avalon

Sign out >>

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Browse Manage Content Manage Groups Search

## My Collections

Sample Collection	5 items (2 unpublished)	1 manager		Delete
Stefan Skip 4-25	1 item	1 manager		Delete
War and Peace in the Nuclear Age	1 item	1 manager	Test Collection	Delete
Old Commercials	1 item (1 unpublished)	1 manager		Delete
Test Collection	7 items (7 unpublished)	1 manager	Testing	Delete
Testcollection	1 item (1 unpublished)	1 manager	A test collection	Delete
Reserve Test	0 items	1 manager	Shostakovich String Quartet No. 8	Delete
Test collection 2	1 item (1 unpublished)	1 manager		Delete
Claire's PawPaw Collection	1 item	1 manager	Of PawPaws and other fruits.	Delete
OR2014	1 item (1 unpublished)	1 manager	Collection of images from OR2014 in Helsinki	Delete

# Add item: Upload, Dropbox, or Batch

Claire collection > Untitled item

## Manage file(s)

### Upload through the web

---

Uploaded files must not exceed 250 MB

 trippy-fish.MOV

Upload

Change

Remove

Skip transcoding 

### Import from a dropbox

---

Use the dropbox to import large files. Attach selected files after uploading. Files will begin processing when you click Save and continue.

Open Dropbox

Save

Save and continue

# Dropbox view

j-rudder@northwestern.edu Sign out>>

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Browse Manage Co

Manage file(s)

Associated bitstreams

Resource description

Metadata about the item

Structure

Organization of resources

Access Control

Who can access the item

Preview

How end users see the item

Delete this item

Source: File Dropbox

Name	Size	Kind	Modified
▼ Avalon demo	4 KB	application/x-directory	2014-10-19 13:45
lunchroom_manners_512kb.mp4	39.7 MB	video/mp4	2013-04-12 09:47
NUvMiami1971-01_1Mbit.mp4	7.37 MB	video/mp4	2014-08-15 11:15
▶ untitled folder	4 KB	application/x-directory	2014-10-19 13:44

0 files selected

Skip transcoding Cancel Submit

## Import from a dropbox

Use the dropbox to import large files. Attach selected files after uploading. Files will begin processing when you click Save and continue.

Open Dropbox

Save Save and continue

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# Batch Folder

Name	Date Modified	Size	Kind
assets	Sep 27, 2013 7:56 PM	--	Folder
agz3068a.wav	Apr 8, 2013 9:39 AM	350.2 MB	Wavefo...audio
agz3068b.wav	Apr 8, 2013 9:39 AM	675.5 MB	Wavefo...audio
lunchroom_manners_512kb.mp4	Apr 12, 2013 9:47 AM	41.6 MB	MPEG-4 movie
OrganClip.mov	Apr 8, 2013 1:35 PM	57.1 MB	Quick...movie
SuccessTestBatch.xlsx	Jul 3, 2014 3:42 PM	183 KB	Micro...rkbook

# Descriptive Metadata: MODS

Resource description - Féte

https://pawpaw.dlib.indiana.edu/media\_objects/avalon:sample-fete-excerpt/edit?step=resource-description

Sign out

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Browse Manage Content Manage Groups Manage Selected Items (3) Search

Manage file(s)  
Associated bitstreams  
Resource description  
Metadata about the item  
Structure  
Organization of resources  
Access Control  
Who can access the item  
Preview  
How end users see the item

Delete this item

Sample Collection > Féte (Excerpt)

Resource description

Fields followed by an asterisk (\*) are required.

**Bibliographic ID** ⓘ

Title\* ⓘ  
Fête (Excerpt)

Main contributor(s)\* ⓘ  
Langlais, Jean, 1907-1991 +

Publication date\* ⓘ  
2010

Creation date ⓘ

Summary ⓘ  
Recorded on May 2, 2010, Auer Concert Hall, Indiana University, Bloomington.

# Access Control

The screenshot shows the Avalon Media System interface for the 'Fête (Excerpt)' item. The page title is 'Fête (Excerpt) - Access Control - Avalon'. The user is logged in as 'jwd' and can click 'Sign out>>'. The main navigation includes 'Browse', 'Manage Content', and 'Manage Groups', with a search bar on the right. The left sidebar contains several menu items: 'Manage file(s) Associated bitstreams', 'Resource description Metadata about the item', 'Structure Organization of resources', 'Access Control Who can access the item', and 'Preview How end users see the item'. A red 'Delete this item' button is also present. The main content area is titled 'Sample Collection > Fête (Excerpt)' and 'Access Control'. It includes sections for 'Item discovery' (with a checkbox for 'Hide this item from search results'), 'Item access' (with radio buttons for 'Available to the general public', 'Logged in users only', and 'Collection staff only'), and 'Assign special access'. The 'Assign special access' section has three columns: 'Avalon User', 'Avalon Group', and 'External Group'. The 'Avalon User' column contains a list of users: 'cjcolvar', 'bdwheele', and 'bkeese', each with a delete 'x' icon. The 'Avalon Group' column has a dropdown menu showing 'Stefan 4-25' and an 'Add' button. The 'External Group' column has a text input field containing 'MUS-M215' and an 'Add' button. At the bottom, there are 'Save' and 'Save and continue' buttons.

# Bulk actions

The screenshot shows the Avalon Media System interface. The browser address bar displays <https://pawpaw.dlib.indiana.edu/bookmarks>. The page title is "Selected Items" and it shows "1 - 3 of 3" items. A red circle highlights the bulk action buttons: "Update access control", "Move", "Publish", "Unpublish", and "Delete".

**Selected Items**  
1 - 3 of 3  
Sort by Relevance ▾ 10 per page ▾

Update access control Move Publish Unpublish Delete

Select All  
 Selected

**1. Beginning Responsibility: Lunchroom Manners (09:31)**

 Main contributors: Coronet Films  
Date: 1959  
Summary: The rude, clumsy puppet Mr. Bungle shows kids how to behave in the school cafeteria - the assumption being that kids actually want to behave during lunch. This film has a cult following since it ap...

**2. Fête (Excerpt) (01:03)**

 Main contributors: Langlais, Jean, 1907-1991  
Date: 2010  
Summary: Recorded on May 2, 2010, Auer Concert Hall, Indiana University, Bloomington.

**3. Symphony no. 3 (1:36:54)**

 Main contributors: Mahler, Gustav, 1860-1911.  
Date: 1996 (Creation date: 1995-01-17/1995-01-18)  
Summary: Recorded Jan. 17-18, 1995, in the Musical Arts Center, Bloomington, Ind. Compact disc. Program notes and biographical notes by David Pickett, and text of the 4th and 5th movements in German with En...

Avalon Media System Project Website - Contact Us  
Avalon Media System Release 4.0.1

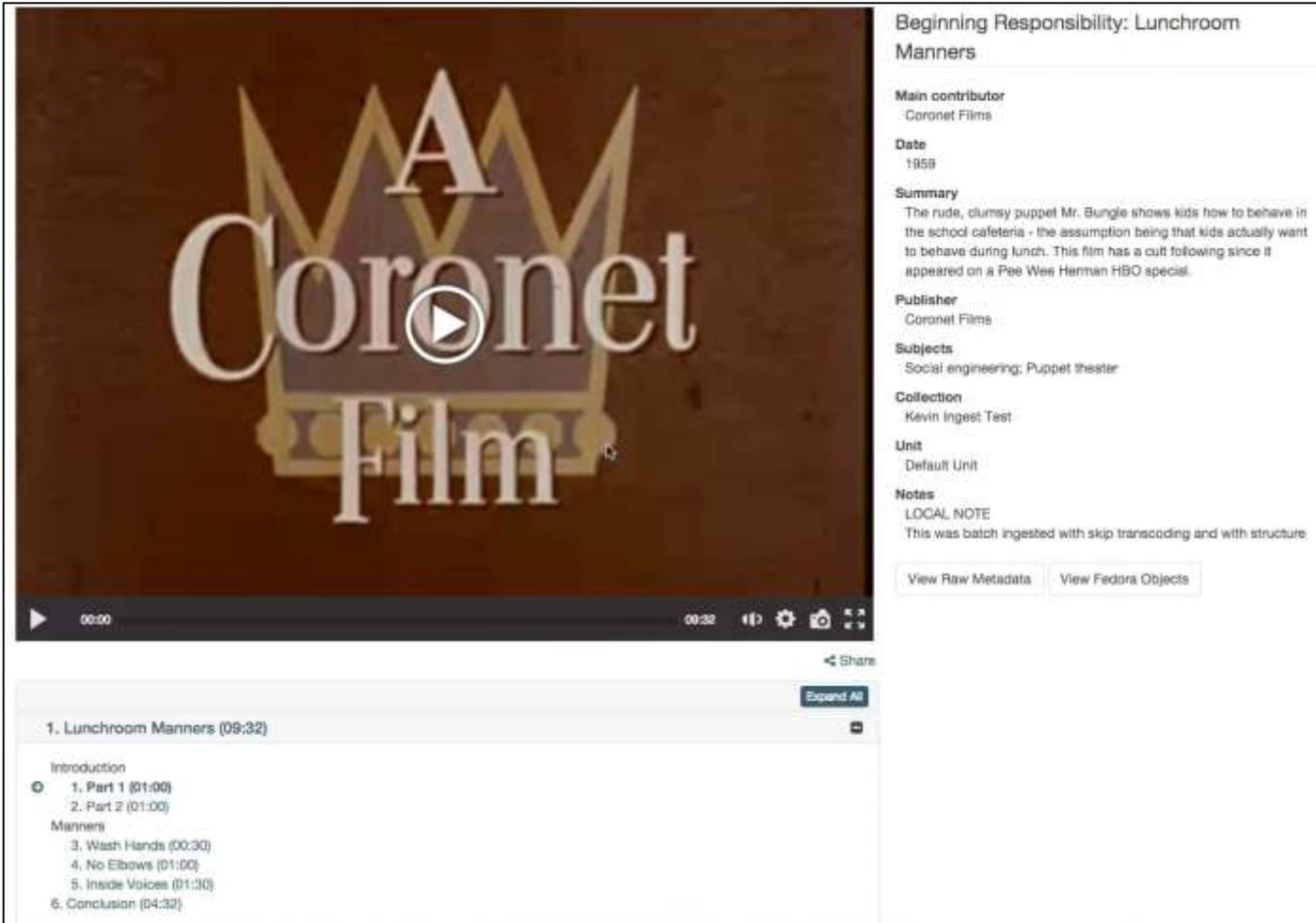
# 4.0: Structural metadata creation

The screenshot shows a web interface for managing media items. At the top, there are navigation links for "Manage Groups" and "Manage Selected Items (0)", along with a search bar. The main content area is titled "Kevin Ingest Test > Beginning Responsibility: Lunchroom Manners" and "Structure". Below this, there is a prompt "Drag files to reorder them." and a table with the following columns: "Type", "Section label", "File name", "Size", and "Structure".

Type	Section label	File name	Size	Structure
	Lunchroom 1	lunchroom_manners_512kb.mp4	75 MB	
Lunchroom Manners			<a href="#">Upload</a> <a href="#">Edit</a> <a href="#">Remove</a>	
Introduction				
1. Part 1				
2. Part 2				
Manners				
3. Wash Hands				
4. No Elbows				
5. Inside Voices				
6. Conclusion				
	Lunchroom Again	avalon_3220-lunchroom_manners_512kb.mp4	75 MB	

At the bottom of the table, there are "Save" and "Save and continue" buttons. The footer of the interface includes "at Website - Contact Us" on the left and "Avalon Media System" on the right.

# 4.0: Structural metadata navigation



The screenshot displays a video player interface for the film "Beginning Responsibility: Lunchroom Manners". The video player shows a dark background with the "Coronet Film" logo, which features a crown and the text "A Coronet Film". A play button is centered over the logo. The video player controls at the bottom show a progress bar at 00:00 and a total duration of 09:32.

Metadata information is displayed on the right side of the interface:

- Beginning Responsibility: Lunchroom Manners**
- Main contributor:** Coronet Films
- Date:** 1958
- Summary:** The rude, clumsy puppet Mr. Bungle shows kids how to behave in the school cafeteria - the assumption being that kids actually want to behave during lunch. This film has a cult following since it appeared on a Pee Wee Herman HBO special.
- Publisher:** Coronet Films
- Subjects:** Social engineering; Puppet theater
- Collection:** Kevin Ingeest Test
- Unit:** Default Unit
- Notes:** LOCAL NOTE  
This was batch ingested with skip transcoding and with structure

Buttons for "View Raw Metadata" and "View Fedora Objects" are located below the notes.

Below the video player, a table of contents is visible:

- 1. Lunchroom Manners (09:32)
- Introduction
  - 1. Part 1 (01:00)
  - 2. Part 2 (01:00)
- Manners
  - 3. Wash Hands (00:30)
  - 4. No Elbows (01:00)
  - 5. Inside Voices (01:30)
- 6. Conclusion (04:32)

# 4.0: Accessibility Improvements

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MEDIA SYSTEM

Sign in >>

Browse



**Fête (Excerpt)**

**Main contributor**  
Langlais, Jean, 1907-1991

**Date**  
2010

**Summary**  
Recorded on May 2, 2010, Auer Concert Hall, Indiana University, Bloomington.

**Contributor**  
Young, Christopher C. (Christopher Clark)

**Publisher**  
William and Gayle Cook Music Library

**Subject**  
Organ music

**Collection**  
Kevin R4 Safari Test2

**Unit**  
Default Unit

← Share

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Avalon Media System Release 4.0

# Other Avalon 4.0 Improvements

- Support for Wowza media server
- Upgrade to Hydra 8 (Fedora 3.x)
- Transcoding API
  - ActiveEncode allows alternative transcoding engines
- New metadata fields
- oEmbed support
- Media URLs can point to specific time offsets

# Avalon 5.0 (Expected 1Q16)

- Updated player
- Player API (possible)
- Content ingest API
- IP-based access control
- Improved structural metadata editor
- More accessibility improvements
- Fedora 4 / Hydra 9?
- Preparation for SaaS pilot

# Future Feature Development

- [See https://wiki.dlib.indiana.edu/display/VarVideo/Avalon+Release+Road+Map](https://wiki.dlib.indiana.edu/display/VarVideo/Avalon+Release+Road+Map)
- Bookmarking, clip making, playlists
- Annotation
- Spotlight integration
- Synchronized transcripts
- Publishing out to external media sites (e.g. YouTube)
- Dynamic adaptive streaming
- Additional access control options
- Reporting and metrics tools
- Internationalization
- More flexible metadata
- Supplemental materials
- PCDM / RDF
- Modularization
- Integration with external tools, e.g. annotation

# Questions?

- [www.avalonmediasystem.org](http://www.avalonmediasystem.org)
- [github.com/avalonmediasystem](https://github.com/avalonmediasystem)