

Triple A: Ares, Avalon and an Addon

Kurt Munson

Alex Barontini

Ares Virtual Conference

November 30, 2017

Northwestern University runs on the quarter system. We make extensive use of course reserves.



Last academic year our reserve service provided:

24,943 students enrolled in **1,700** courses accessed **20,518** items **137,927** times via e-reserve via Ares.



For audio and video streaming, there were **124,630** views/listens for streamed items for **1,100** courses via Avalon.



What is Avalon?

IMLS National Leadership and Andrew W. Mellon Foundation grant supported project lead by Indiana University and Northwestern University to develop a tool for the curation of video and audio files.

“Video and audio collections for education are growing in importance and size. University libraries and archives need a complete and scalable system so they can easily curate their video and audio files and manage workflows for generating video and audio content.

...

In 2010, Indiana University conducted a survey of academic libraries' current practices and future aspirations regarding video-streaming technologies and services. As reported in a [presentation at the 2010 EDUCAUSE Conference](#), the research found that academic libraries are increasingly involved in streaming video content in support of pedagogy and research.”

Learn more at: <http://www.avalonmediasystem.org/>

How Avalon displays in Canvas

Prep Site Term

Home

Announcements

Assignments

Discussions

Grades

People

Pages

Files

Syllabus

Outcomes

Quizzes

Modules

Conferences

Collaborations

Attendance

Library Media

Course Reserves

Northwestern

LIBRARIES | REPOSITORY AUDIO + VIDEO

Browse

klm046 Prep Site B

Manage Selected Items (0)

Playl

Browse By

Format	▼
Moving Image	1
Main contributor	>
Date	>
Collection	>
Unit	>
Language	>

You searched for: External Group > klm046 Prep Site B ✕

1 entry found

SORT BY RI

1. Back to the future (1:57:24)



Date: 2002 (Creation date: 1985)

Main contributors: Canton, Neil.

Summary: Back to the Future: It's the mi average 17-year-old slacker who happens t Brown. Doc's latest invention is a time mac

N

CCS_KIM046-B > kim046 Prep Site B

- Account
- Admin
- Dashboard
- Courses
- Calendar
- Inbox 632
- Help

- Prep Site Term
- Home
- Announcements
- Assignments
- Discussions
- Grades
- People
- Pages
- Files
- Syllabus
- Outcomes
- Quizzes
- Modules
- Conferences
- Collaborations
- Attendance
- Library Media**
- Course Reserves
- Blue Jeans
- CTEC
- NameCoach
- Settings

Northwestern

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LIBRARIES | REPOSITORY AUDIO + VIDEO

Search audio or video

- Browse
- kim046 Prep Site B
- Manage Selected Items (0)
- Playlists
- About
- Help



Share

Back to the future

Date
2002 (Creation date: 1985)

Main contributor
Canton, Neil.

Summary
Back to the Future: It's the mid-80's, and Marty McFly is your average 17-year-old slacker who happens to be friends with an inventor, Doc Brown. Doc's latest invention is a time machine, that ends up transporting Marty back to 1955 where he must bring his parents together so that he will exist when he gets back to his own time.

Contributors
Canton, Neil.; Gale, Bob, 1951-; Zemeckis, Robert, 1952-; Fox, Michael J., 1961-; Lloyd, Christopher, 1938-; Thompson, Lea, 1961-; Glover, Crispin.; Shue, Elisabeth.; Wilson, Thomas F., 1959-; Steenburgen, Mary.; Spielberg, Steven, 1946-; Silvestri, Alan.; Universal Studios Home Video (Firm)

Publisher
Universal Studios

Avalon Workflow

How do we upload something to Avalon for use in Course Reserves?

1. From the Avalon homepage, go to manage content

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LIBRARIES | REPOSITORY AUDIO + VIDEO Search audio or video 🔍

[Browse](#) **[Manage Content](#)** [Manage Selected Items \(0\)](#) [Playlists](#) [About](#) [Help](#)

Browse By

Format	▼
Moving Image	3,167
Sound Recording	1,208
Main contributor	>
Date	>
Genres	>
Collection	>
Unit	>
Language	>

Featured Collections

 <p>Herskovits Library of African Studies Audio Collection</p>	 <p>Robert Marcellus Master Class Audio Archives</p>	 <p>Northwestern University Football Films</p>
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Limit to

Published	>
Created by	>

Using the System

Avalon houses audio and video collections. Use the search box, or browse using the terms on the left side to discover content. Some content is only available when you sign in. Sign in with your ID and passphrase.

2. Import the file

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LIBRARIES | REPOSITORY AUDIO + VIDEO Search audio or video 🔍

[Browse](#) [Manage Content](#) [Manage Selected Items \(0\)](#) [Playlists](#) [About](#) [Help](#)

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

Course Video > Untitled item

Manage file(s)

Upload through the web

Uploaded files must not exceed 250 MB

SELECT FILE

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

Dropbox location: s3://avalon-masterfiles-cfx3wj9/dropbox/Course_Video
Contact your system administrator for more information.

SAVE **SAVE AND CONTINUE**

3. Fill out the Metadata

The screenshot shows the Northwestern Libraries | Repository Audio + Video metadata editing interface. The top navigation bar includes the Northwestern logo, a user profile 'A-BARONTINI@NORTHWESTERN.EDU - SIGN OUT', and the site title 'LIBRARIES | REPOSITORY AUDIO + VIDEO'. A search bar is located on the right. Below the navigation bar are tabs for 'Browse', 'Manage Content', 'Manage Selected Items (0)', 'Playlists', 'About', and 'Help'. The main content area is divided into a left sidebar and a main editing area. The sidebar contains sections for 'Manage file(s)', 'Resource description', 'Structure', 'Access Control', and 'Preview', each with a brief description. A red 'DELETE THIS ITEM' button is at the bottom of the sidebar. The main editing area shows the breadcrumb 'Course Video > Back to the future' and the title 'Resource description'. A note states 'Fields followed by an asterisk (*) are required.' The 'Bibliographic ID' field is set to 'OTHER' with the value '21489415050002441' and an 'IMPORT' button. The 'Title*' field contains 'Back to the future'. The 'Publication date*' field contains '2002'. The 'Main contributor(s)' field contains 'Canton, Neil.' with a '+' button. The 'Creation date' field contains '1985'. The 'Summary' field contains the text: 'Back to the Future: It's the mid-80's, and Marty McFly is your average 17-year-old slacker who happens to be friends with an inventor, Doc Brown. Doc's latest invention is a time machine, that ends up transporting Marty back to 1955 where he must bring his parents together so that he will exist when he gets back to his own time.'

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LIBRARIES | REPOSITORY AUDIO + VIDEO

Search audio or video

Browse Manage Content Manage Selected Items (0) Playlists About Help

Manage file(s)
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Resource description
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DELETE THIS ITEM

Course Video > Back to the future

Resource description

Fields followed by an asterisk (*) are required.

Bibliographic ID

OTHER 21489415050002441 IMPORT

Title*

Back to the future

Publication date*

2002

Main contributor(s)

Canton, Neil. +

Creation date


1985

Summary

Back to the Future: It's the mid-80's, and Marty McFly is your average 17-year-old slacker who happens to be friends with an inventor, Doc Brown. Doc's latest invention is a time machine, that ends up transporting Marty back to 1955 where he must bring his parents together so that he will exist when he gets back to his own time.

4. Organize the structure if there are multiple items

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LIBRARIES | REPOSITORY AUDIO + VIDEO Search audio or video 

[Browse](#) [Manage Content](#) [Manage Selected Items \(0\)](#) [Playlists](#) [About](#) [Help](#)

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


Course Video > Buffy, the vampire slayer. Season 1. Episodes 1,5,7,11,12.

Structure

Drag files to reorder them.

Type	Section label	File name	Size	Structure	Captions
	Ep01. Welcome to the Hellmouth		200 MB		
	Ep05. Never Kill a Boy on the First Date		9.45 GB		
	Ep07. Angel		206 MB		
	Ep11. Out of mind, out of sight		206 MB		
	Ep12. Prophecy girl		206 MB		

SAVE **SAVE AND CONTINUE**



5. Assign the course through the External Group Identifier

LIBRARIES | REPOSITORY AUDIO + VIDEO Search audio or video

[Browse](#) [Manage Content](#) [Manage Selected Items \(0\)](#) [Playlists](#) [About](#) [Help](#)

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

Course Video > The revenant

Access Control

Item discovery

Hide this item from search results

Item access

Available to the general public
 Logged in users only
 Collection staff only

Assign special access

Avalon User* ? **Begin Date** **End Date**

ADD

Avalon Group* ? **Begin Date** **End Date**

ADD

External Group* ? **Begin Date** **End Date**

ADD

2017SP_ENGLISH_214-0_SEC01 Introduction to Film and Its Literatures

6. After Avalon has finished converting the file, publish the file so it can be viewed in Canvas

The screenshot displays the Northwestern Libraries Repository interface. At the top, the header includes the Northwestern logo and the user email 'A-BARONTINI@NORTHWESTERN.EDU - SIGN OUT'. Below the header, the main navigation bar contains 'LIBRARIES | REPOSITORY AUDIO + VIDEO' and a search bar labeled 'Search audio or video'. A secondary navigation bar includes links for 'Browse', 'Manage Content', 'Manage Selected Items (0)', 'Playlists', 'About', and 'Help'. Below this, a control bar features three buttons: 'PUBLISH' (highlighted with a red circle and a red arrow), 'EDIT', and 'DELETE'. The main content area shows a video player for 'Back to the future' with a play button overlay. To the right of the video player, there is a metadata section with the following details:

Back to the future

Date
2002 (Creation date: 1985)

Main contributor
Canton, Neil.

Summary
Back to the Future: It's the mid-80's, and Marty McFly is your average 17-year-old slacker who happens to be friends with an inventor, Doc Brown. Doc's latest invention is a time machine, that ends up transporting Marty back to 1955 where he must bring his parents together so that he will exist when he gets back to his own time.

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Publisher
Universal Studios

Subjects

Avalon Implementation Process

Timeline for Avalon Course Reserves Implementation

Fall 2014- Staff testing

Winter 2015- initial live testing in courses and Faculty Guinea Pigs testing it to stream media.



September 2015 - the old streaming system died, like a week before classes started. Ugh!

Fall Quarter 2015 - Live with Avalon as sole platform for course reserve audio and video streaming

Issues with that initial implementation:

- ✓ Workload: for every single course that used streaming media, staff had to make themselves instructors in every canvas class that used streaming so they could expose the library media link and click that link so the LTI would run and write the information into Avalon. (**six** additional steps)
- ✓ Faculty Freakout: Faculty would become very concerned that staff were breaking into their canvas sites willy-nilly. It's not a conspiracy, really.
- ✓ Faculty Freakout caused Academic Technologies staff to **TOTALLY FREAK OUT** leading to the idea that no reserve staff who had graduated from Northwestern should **ever** go into a Canvas site to troubleshoot. Again, it's not a conspiracy, really.
- ✓ And all because we just needed to run that *#&\$%&@ **LTI** once!



LTI- What is that?

“Learning Tools Interoperability (**LTI**) is a standard created by the IMS Global Learning Consortium that links content and resources to learning platforms. Its primary purpose is to connect learning systems such as a learning management system (LMS) with external service tools in a standard way across learning systems.”

[Learning Tools Interoperability - Wikipedia](https://en.wikipedia.org/wiki/Learning_Tools_Interoperability)

https://en.wikipedia.org/wiki/Learning_Tools_Interoperability

Faculty request all their course reserves using Ares. All request are managed in Ares. For reserves, Avalon only job is to serve media content within Canvas to the students.

Solution- If all the data is in Ares already, and we can identify streaming requests by their format (i.FormatType), we should be able to run the LTI automatically thus creating the course in Avalon.

This gets the staff out of Canvas so they can do their work in Ares and Avalon only. (six steps)

No more freak outs!



We could automate running the LTI by developing a Server Addon for Ares.

A server addon does specialized work. This addon:

- ✓ Looks for items that match specific criteria (AVR Processing status),
- ✓ Compiles a string of data elements from Ares database fields,
- ✓ Formats them as LTI headers and sends them to Avalon,
- ✓ Avalon responds back to let Ares know if the data populated Avalon correctly or not.
- ✓ If it didn't work the addon moves the requests to a manual processing queue for staff review.

12	<input checked="" type="checkbox"/>	Awaiting Reserves Processing	i.DocumentType = 'HardCopy' and i.ProcessingLocation = ...	Awaiting Alma Input
13	<input checked="" type="checkbox"/>	Awaiting Review By Staff	i.ItemFormat in ('Video', 'Audio')	AVR Processing
14	<input checked="" type="checkbox"/>	Awaiting Reserves Processing	i.ItemFormat in ('Video', 'Audio')	AVR Processing
15	<input type="checkbox"/>	Awaiting Shipping Staff Review	i.ItemID in (select distinct ItemID from the Teaching Lab ...)	Awaiting Shipping S...

Impact of the Addon

1. Better customer service because we didn't need to go into faculty members' private teaching spaces.
2. Reduced staff work because of a more straight forward workflow.
3. Improved communication and increased understanding of different groups, i.e., software developers and reserve staff members, workflows which lead to more consideration of how changes in one area would affect others. Culture change?

But, our current set-up in Canvas for reserves is a work in progress...



Items are divided by format: text or streaming

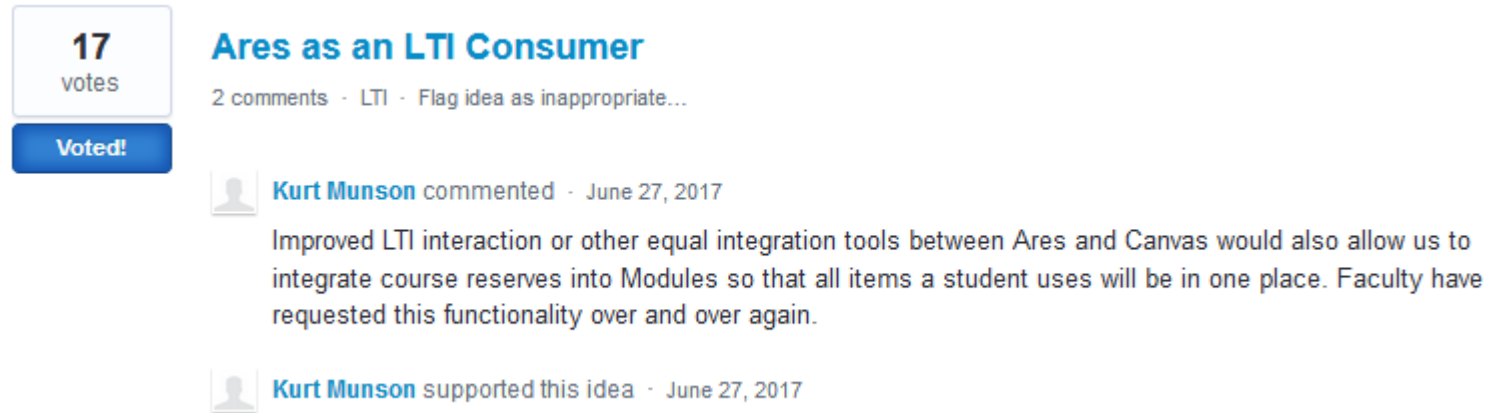


A less than ideal situation

A screenshot of the Canvas LMS interface. The top navigation bar shows the course ID '2017WI_IMC_461-0_SEC22' and the page title 'Syllabus'. The left sidebar contains navigation icons for Account, Dashboard, Courses, Calendar, Inbox (with a '2' notification), and Help. The main content area has a vertical menu with options: Home, Announcements, Syllabus (highlighted in blue), Assignments, Modules, Course Reserves (highlighted with a blue box), Collaborations, Discussions, Grades, People, Library Media (highlighted with a blue box), Blue Jeans, CTEC, and Quizzes. The right side of the page displays the course title '2017WI_IMC_461-0 Media Economics and Technology', a link to 'IMC 461 Section 22 Syllabus Winter', and a 'Course Summary' table. The table has columns for 'Date' and 'Details' and lists dates: Thu Jan 5, 2017; Tue Jan 10, 2017; and Thu Jan 12, 2017.

Vision

Goal and next steps:




17
votes


Voted!

Ares as an LTI Consumer

2 comments · LTI · Flag idea as inappropriate...

 **Kurt Munson** commented · June 27, 2017

Improved LTI interaction or other equal integration tools between Ares and Canvas would also allow us to integrate course reserves into Modules so that all items a student uses will be in one place. Faculty have requested this functionality over and over again.

 **Kurt Munson** supported this idea · June 27, 2017

If Ares becomes an LTI Consumer, we can not only eliminate Library Media (Avalon) in Canvas but we will be able to also remove course reserves and serve students ALL materials via the Modules or Assignments tabs in Canvas so all materials will be in one place and contextualized by assignment rather than the library tool that provides them.

The Video is linked to from within the Canvas module.

The image shows a screenshot of the Canvas LMS interface. On the left is a navigation sidebar with the following items: Home, Modules (highlighted in blue), Assignments, Announcements, ~~Course Reserves~~, Discussions, and ~~Library Media~~. The main content area shows a course titled "Michael J Fox- the evil oposite of Elvis, the Anti-Elvis Per Mojo Nixon" with a module "Watch Back to the Future" (0 pts). A blue arrow points from the title of the video resource in the module to the "Watch Back to the Future" assignment in the right-hand sidebar. Another blue arrow points from the top text to the "Modules" item in the sidebar. A third blue arrow points from the text "Stable URL from Avalon" to a URL in a sharing dialog box. The sharing dialog box has tabs for "Share this resource", "Embed", and "LTI URL" (selected). It contains the text "Copy the link below to share this resource via LTI" and two LTI URLs: "https://media.northwestern.edu/users/auth/lti/callback?target_id=w6634369k" and "https://media.northwestern.edu/users/auth/lti/callback?target_id=sj139231c". A "Share" button is in the top right of the dialog.

Questions

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