





Grant partners







NJ New Jersey Digital Highway DH — Where History, Culture, and Learning Merge —





Why NJVid?

Digital video creates a multisensory experience that immerses the user in both information and context. A digital video lecture enables a student to "relive" a classroom experience, using video and audio cues to identify key concepts in the lecture and classroom discussion.







Why NJVid?

Problem:

The technical barriers in digitizing and making digital video available to users remains significant for smaller institutions. A statewide digital video portal, with collections and services that address the wide-ranging needs of lifelong learners, educators and students, is a compelling venture, but also a complex task that requires great collaboration and focus.

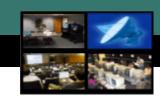




Growing demand for streamed video

- Online information in various forms & formats has become an almost universal library staple, a service expected by most library users
- Increasing user expectations & demand for remote, 24/7 access to library resources
- Critical need to preserve and/or replace deteriorating collections of older media....VHS, etc.
- Budget limitations on purchase of multiple copies or replacements
- Pressures on library viewing facilities, equipment & services





Growing demand for streamed video

- Common use of online teaching/learning resources, such as Bb, WebCT, Sakai-compliant systems, which allow for media content
- Changing client demographics & changing educational programs to serve these clients (remote library services, etc.)
- General trend toward resource sharing among libraries & other educational and cultural institutions
 Transition

Physical collection of media

Service-based model of access to both non and licensed resources



Three types of Collections

Locally Owned Videos:

Commons access provides access to a shared-byall collection that can include such videos as Organizational events (lectures, speakers, Labor Day Parade) Re-enactments and historic events (constructing an historic bridge over the D&R canal) NJN videos, Oral Histories, etc.





Three types of Collections

Commercial Videos:

Login Access provides a common platform for describing, storing and making commercial digital videos available for the participating institutions that purchase the rights. VALE, Virtual Academic Library Environment, will negotiate the rights for these videos and participating users can access these





Three Types of Collections

Learning-on-Demand

Login Access will provide a common platform for accessing Learning-on-Demand. These are educational videos that will make course lectures available for faculty and students to segment (create "virtual clips"), annotate, and make available within each participating institution. Learning-on-Demand will primarily be used in the K20 educational environment although other participants that host educational activities and courses may also find it useful.





Identity Management is key to NJVid

- Service depends upon:
 - Institution you are from
- One server needs to be able to verify this information for members of any institutions
- Requires "federated identity"

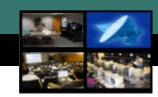




Key Concepts

- Establishing identity; levels of assurance
- Identifiers
- Authentication
- Authorization
- Directory services
- Policy and governance
- Federation





NJTrust

- Currently 13 institutions are part of NJTrust
- Website to assist in becoming a member of NJTrust

http://www.njtrust.net/

- Allows a common server to authenticate users based on an institution's own IdM and finds roles and attributes to make authorization decisions
- Maintain user privacy





Federated Identity

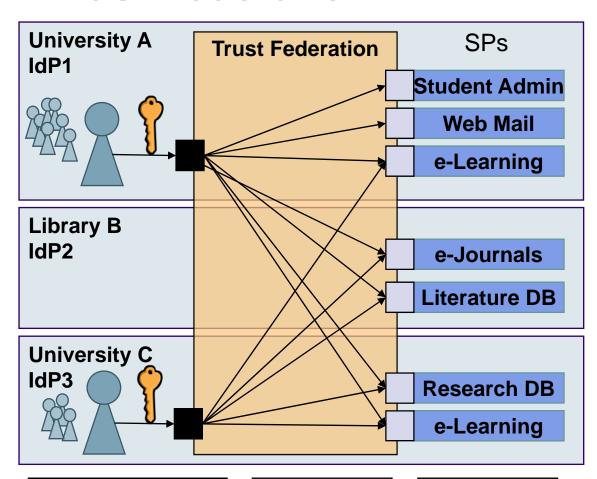
 Enterprises are moving towards SOA -Users are accessing external systems and resources outside Institutional domains.

 Identity Federations - enable users of one domain to securely access data on another domain seamlessly using local authentication and authorization (A&A)





Trust Federation



- Trust fabric between Identity Providers [IdP] and Service Providers [SPs].
- Framework to collaborate with one another in a shared, secure and trusted manner.
- Process of adding IdPs and new SPs is simplified
- NJTrust

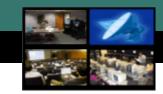
User Administration Authentication

Authorization

Resource









- NJViD One of the first services that is being offered via the Federation.
- Videos available in the NJViD Commons are openly accessible
- Licensed Commercial videos as well as Learning-on-demand need Authentication & Authorization





How to participate?

- Run your own Shibboleth Identity Provider (IdP)
 - Recommended and more secure
- Participate in the Statewide Directory System
 - Institutions without a directory server
 - Administrators can manage their Institutional User data using web front-end
 - For smaller organizations K12s, Museums,
 Public Libraries

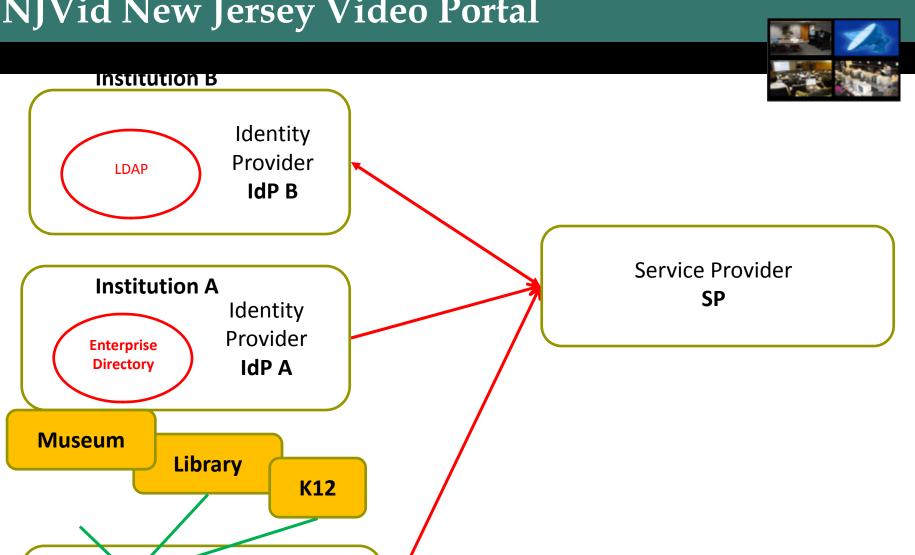
Central

Shibboleth

IdP

Statewide

LDAP







InCommon Federation

- InCommon, NCTrust, UCTrust
- We are not asking participants to join InCommon

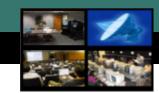




Training and Support

- Shibboleth IdP VMs for Testing at www.njedge.net/shibboleth
- Instructions for joining NJTrust http://federation.njedge.net
- Other Training Sessions
- Identity Management Survey www.njedge.net/idmsurvey





Questions?

Questions? Send them to shib@njedge.net





Software Review

Area	Software Used
Applications/Web Interface	PHP / MySQL - based
	(developed in-house)
Journals	Open Journal System (PKP)
	(with in-house enhancements)
Search Engine	Amberfish
	(with in-house enhancements)
Workflow Management	PHP / MySQL - based
	(developed in-house)





Software Review (cont'd.)

Area	Software Used
Collection Services	PHP / MySQL - based
	(developed in-house)
Handles/Persistent IDs	CNRI Handle Server
Video Streaming Server	Darwin (Apple)
	(Possibly Flash in the near-
	future)
Digital Library Framework	FEDORA
OS/Web Server	Linux/Apache





Repository Architecture

What is FEDORA?

An Architecture for storing, managing and retrieving assets which are treated as Digital Objects

Supports not just storage and access, but <u>preservation</u> of these objects.

Part of the Duraspace community: aim is to provide leadership and innovation in open source technologies for global communities who manage, preserve, and provide access to digital content.

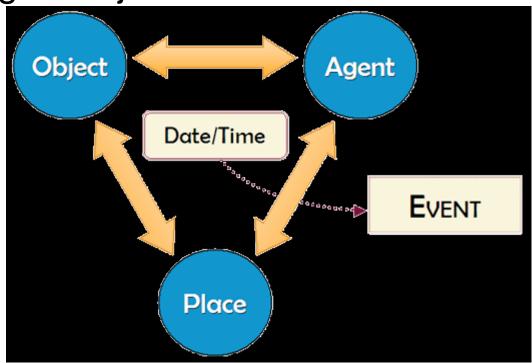






What is Fedora?

Provides us with event-based control of our digital objects



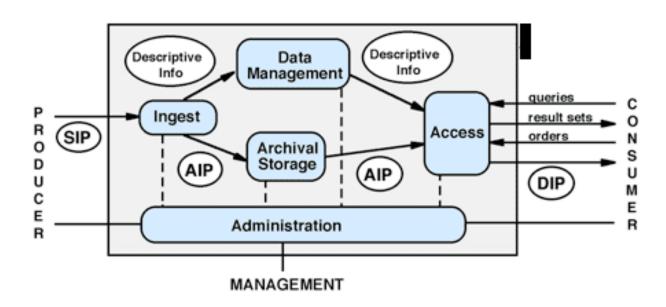






What is Fedora?

Conforms to the Open Archives Information System Functional Model (OAIS)



The OAIS Functional Model http://nssdc.gsfc.nasa.gov/nost/isoas/





Digital Asset Management with the Workflow Management System (WMS) Cataloging and Repository Object

Cataloging and Repository Object Control Permits cataloging of digital objects, ingest and management of their collections and metadata

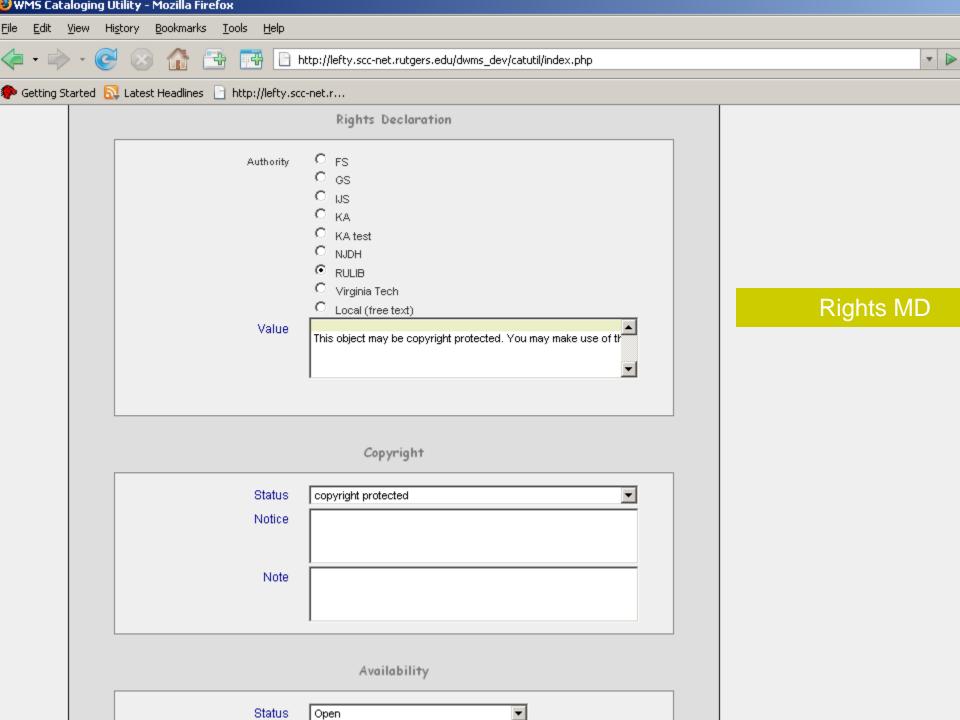
Digital Object Workflow Management System
Contact Us Report Error Help Center Version
Welcome to the digital object workflow management system! You need to have a valid wms account to be able to work here. If you do not have a wms account or forgot your password, please use the links provided below to contact wms system administrators. User Name: Password: login Forgot your password? Do not have an account?



EXIT Template View Entries Clear All SAVE Template used: [none] Metadata Type Descriptive Technical Source Rights Required Jump to DESCRIPTIVE METADATA (* indicates required element) **T** Type of Item * Movinglmage Title Information Title * Type Part Name Part Number Nonsort Entry List (Title Info) ka test 09-21-07 Add More Change Remove Subtitle Information

Version		
Operating System	<u> </u>	
	Format	
Type	Encoding	
Version		
Value		~
		d More
	Au	a More
	Compression	
Compression Scheme Compression Ratio	Compression LZW Uncompressed Unknown Wavelet	
	LZW Uncompressed	
Compression Ratio	LZW Uncompressed Unknown	
Compression Ratio	LZW Uncompressed Unknown Wavelet	
Compression Ratio Color Space	LZW Uncompressed Unknown Wavelet	
Compression Ratio Color Space Sampling Unit	LZW Uncompressed Unknown Wavelet	

Technical Metadata





An XACML Policy Example

```
<Subject>
<SubjectMatch MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
< Attribute Value
DataType="http://www.w3.org/2001/XMLSchema#string">student</AttributeValue>
<SubjectAttributeDesignator AttributeId="fedoraRole" MustBePresent="false"</pre>
DataType="http://www.w3.org/2001/XMLSchema#string"/>
</SubjectMatch>
</Subject>
<Resource>
< ResourceMatch MatchId="urn: oasis: names: tc: xacml: 1.0: function: string-equal">
<a href="http://www.w3.org/2001/XMLSchema#string">MOV-1</a>
</AttributeValue>
</ResourceMatch>
</Resource>
```





Video Delivery - Format Specifications

For restricted files (Commercial Videos):

Streaming Protocol: MPEG-4 H.264 (Quicktime)



- →30 frames/sec, 640x480 resolution
- Data rate: 786 kbps to 1Mbps
- Progressive Download Not Supported
- Streaming video protected by Authentication





Video Delivery - Format Specifications

For non-restricted files:

Streaming Protocol: MPEG-4 H.264 (Quicktime)



- →30 frames/sec, 640x480 resolution
- Data rate: 786 kbps to 1Mbps

Progressive Download

- Flash Video (FLV with SWF wrapper)
- →24 fps, 640 x 480 512 kbps
- "Universal" but slightly lower quality

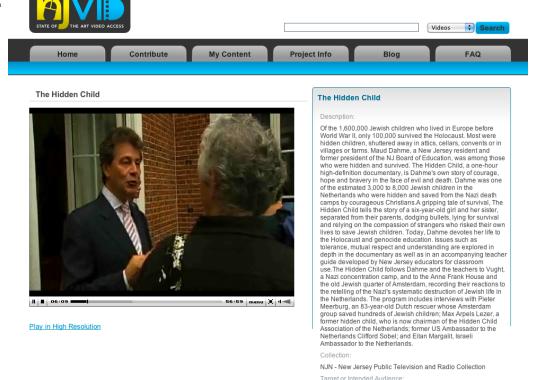






Front End Browse & Search Portal Systems

Permits visitors, researchers and end users to browse assets, search for items, and soon, annotate and remix content.



STATE OF THE ART VIDEO ACCESS



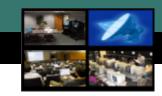
NJVid Year 2 Survey Outcome Based Evaluation

Judy Jeng, Ph. D.

Digital Library Evaluation Consultant

NJVid Advisory Board June 15, 2009





Evaluation Objective

 To gather feedback to refine NJVid appearance, functionality, and interface design.





Evaluation Methodology

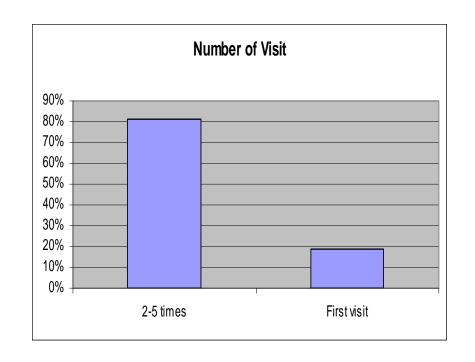
- Online survey
- March 30 April 24, 2009
- Convenience sampling among NJVid participants
- 16 completed responses





Number of Visits

- 81% of survey participants have visited NJVid 2-5 times.
- 19% have made their first visit.

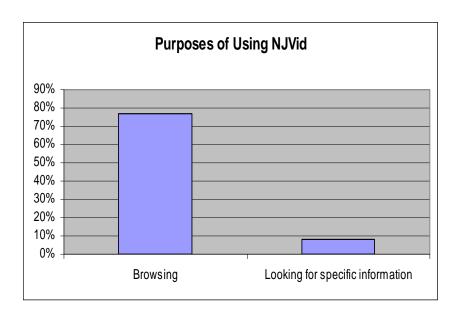






Purposes of Using NJVid

- 77% for browsing
- 8% for looking for specific information



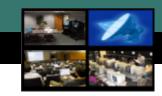




Browsing

 73% found it useful to browse by subject or by contributing organization.





Display

- 53% found it useful to arrange display by title or date.
- 79% said the essential data elements such as title, date created, description, duration, and target audience should be displayed on the hit list.





Suggestions

- We need more content for the NJVid digital library.
- We need clearer explanation of the purpose (for whom was it designed), process, and resources.
- Headings are ambiguous.
- It was not apparent that videos may be selected via the left-hand pane.
- We need to have more New Jersey history subject headings.
- We need longer display of search results.
- We need the ability to view brief segments, queue segments into a playlist of sorts, ability to download segments and incorporate into PowerPoint presentation.
- Better indication on "what's new."

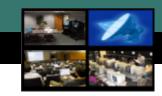




Commercial Video collection

- Deposit and Digitization Master Agreement
- Benefits of this collection
 - No need for physical acquisitions
 - Shared cataloging
 - New possibilities for user access
 - Online access to some vendor collections for the first time
 - Overall reduction in staff workload and time spent

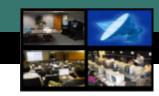




First Commercial Video collection

- Films Media Group
 - Signed Deposit Agreement
 - Negotiated reduced consortium pricing
 - Discussed technical requirements for hosting FMG collection
 - Acquired FMG's video files, metadata and thumbnail images





Films Media Group Test

- Initial commercial video collection
- 25 titles chosen
 - Oft-licensed titles
 - Variety of subject matter
- 8 participating institutions
 - Existing or committed FMG licensees
 - Free access to 25 FMG titles for evaluative purposes





VALE Digital Media Committee

Charge:

To provide a vehicle for VALE member institutions to obtain streaming rights for digital media

http://www.valenj.org/committees
/digital-media





VALE Survey on Licensing Videos

- Do you currently stream videos?
- 2. What titles and/or distributors would you like VALE to begin negotiations with for the coming year?
- If you are interested in streaming, but haven't provided this service at your institution, do you anticipate that you will join in the coming fiscal year?





Commercial Video Today

- Over 1,000 titles
- Currently 5 Commercial Video Vendors
 - Ambrose
 - BioMedia
 - California Newsreel Collection
 - FMG
 - Media Education Foundation

http://njvid.net





NJVid Stats – GeoMap Report



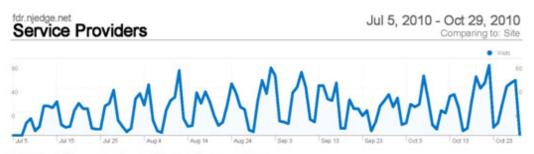
3,573 visits came from 54 countries/territories

Visits 3,573 % of Site Total: 100.00%	Pages/Visit 6.84 Site Avg. 6.84 (0.00%)	Avg. Time on Site 00:05:46 Site Avg: 00:05:46 (0.00%)		% New Visits 48.84% Site Avg. 48.84% (0.00%)	45.56° Site Avg	Bounce Rate 45.56% Site Avg: 45.56% (0.00%)	
Country/Territory		Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate	
United States		3,341	7.18	00:06:05	46.03%	43.94%	
Canada		74	1.91	00:01:04	90.54%	67.579	
United Kingdom		14	1.43	00:00:14	100.00%	57.149	
Australia		13	1.85	00:01:57	84.62%	76.929	
India		13	1.31	00:00:31	92.31%	69.239	
Germany		9	1.44	00:00:11	100.00%	77.78%	
New Zealand		8	2.62	00:04:26	87.50%	37.50%	
Cyprus		7	3,29	00:00:52	57.14%	42.869	
Italy		6	1.00	00:00:00	100.00%	100.009	





NJVid Stats – Networks Report



3,573 visits came from 517 service providers

Visits 3,573 % of Site Total: 100.00%	Pages/Visit 6.84 Site Avg: 6.84 (0.00%)	00:05: Site Avg:	ne on Site 46 6 (0.00%)	% New Visits 48.84% Site Avg: 48.84% (0.00%)	45.56 ° Site Avg: 45.56°	
Service Provider		Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate
william paterson univ	versity	801	12.49	00:09:42	7.37%	53.31%
new jersey institute o	of technology	420	11.29	00:13:07	17.38%	25.00%
comcast cable communications inc.		398	5.30	00:05:55	39.70%	41.21%
montclair state unive	ersity	187	6.35	00:04:18	46.52%	26.74%
verizon internet serv	ices inc.	181	3.70	00:03:08	78.45%	42.54%
optimum online (cab	levision systems)	139	5.12	00:04:05	83.45%	40.29%
middlesex county co	llege	94	3.51	00:00:54	28.72%	51.06%
rutgers university		90	4.72	00:01:58	45.56%	31.11%
fairleigh dickinson ur	niversity	88	3.45	00:01:58	93.18%	76.14%
road runner holdco I	ic .	71	2.45	00:01:34	88.73%	57.75%





NJVid Stats – Visitor Loyalty Report

fdr.njedge.net Visitor Loyalty

Jul 5, 2010 - Oct 29, 2010 Comparing to: Site

Most visits repeated: 1 times

Count of visits from this visitor including current	Visits that were the visitor's nth visit	Percentage of all visits
1 times	1,745.00	48.84%
2 times	267.00	7.47%
3 times	138.00	3.86%
4 times	94.00	2.63%
5 times	64.00	1.79%
6 times	52.00	1.48%
7 times	40.00	1.12%
8 times	37.00	1.04%
9-14 times	160.00	4.48%
15-25 times	157.00	4.39%
26-50 times	178.00	4.98%
51-100 times	121.00	3.39%
101-200 times	101.00	2.83%
201+ times	419.00	11.73%





What's Next?

Learning-on-Demand





Learning on demand

- Quick upload of videos from their local computer
- Allows institutions to change access restrictions to their uploaded videos
- Native Support for Flash and H.264 (MPEG-4) videos
- Allows automatic transcoding from MPEG-1, MPEG-2, MOV, WMV using Encoding.com (encoding.com)
- Accepts content and metadata exported from lecture capture systems such as Camtasia Relay server and Echo 360.





LoD Administration hierarchy

SCM

Super Collections Manager (SCM) (Statenet level)

- Manages all videos, collections and permissions
- Can create ICMs

ICM

Institutional Collections Manager (ICM)

- Manages all videos and collections that belong to his/her institution
- Can create users and assign collections to each user
- Can view and delete videos by users of his institution
- More than one ICM per institution permitted (eg. departmental level).
- Manages Labels.

Learning on Demand User

- Can upload videos to assigned collections
- Manage their own content. Add/delete
- Can request access by going to the LoD site
- ICM will have to approve access.







LoD Access Restrictions

Authentication

Members needs to be part of NJTrust to access this service.

No need to manage usernames and passwords

Authorization (permit/deny access)

Authorization is handled by the LoD system. Users identified by their shibboleth 'eppn' (Netid's or Userid's) and shibboleth affiliation.





LoD Authentication Labels

- All videos uploaded into LoD are by default 'private'. Video can be seen only by uploader.
- Labels can be used to enable access to
 - Institutional role (student@institution.edu etc) --OR--
 - NetIDs or UserIDs (<u>jdoe14@institution.edu</u>)
- A Video can have multiple labels
- Applying the 'Public' label makes the video accessible without any authentication.
- Access by private URL in the works





Learning on Demand	Add a Video			
Manage Videos	Usage (MB)	Jobs in Queue	e Uploaded Videos	
- Add - Edit	12.55/2048 (1%)	0	2	
Manage Users	Title*		-	Insert title
AddRequests(0)				
Manage Labels	Choose a file to upload*	Upload	Click this button to upload video	os from your
Create Labels Edit Labels	Choose a me to apioud		computer	
Camtasia Relay Server		OR	If video is in a ft	p server or a website provide the link
Configuration SettingsLogs	URL/FTP of file location*			
Usage(0.61%) Contact Us				
Contact of	Abstract*		Abstract or descripti	ion of the video
	Collection*	CART: The College of the Arts Col	lection • Pick the collection	tion you want the video to be ingested to
		Architecture Art Biography Business Country Economy Education Environment	Pick one or more subje	ect terms

Geography Government

Health History Languages Law Literature

Subject*(Hold down Ctrl to select multiple values)





Contributors	Add Person Add Institution	Add one or more contributors
Language*	English ▼	Pick language of the video
Target Audience* (Hold down Ctrl to select multiple values)	General TV-G (general audience) researchers educators Adult College Educator Higher education K-12 (general) High School (grades 10-12) 9-12 secondary General Education Primary (grades 1-6) Adult/Continuing education Special Audiences Female Other	Pick one or more target audience
Date Created*	MM-DD-YYYY	This is the date the video was created.
Expiry Date (Date on which video will be deleted)	0000-00-00 MM-DD-YYYY	Pick the expiration date of the video. The video is inaccessible after this date.
Convert to Format	None ▼	If the video is in a format that is not standard, pick one of the presets for conversion (FLV or MP
	Submit Request	



Add



Learning	on	Demand
----------	----	--------

Manage Videos

- Add
- Edit

Manage Users

- Add
- Requests(0)

Manage Labels

- Create Labels
- Edit Labels

Camtasia Relay Server

- Configuration Settings
- Logs

Usage(0.61%)

Contact Us

Add a new user to Learning On Demand

Attention: Entries with * mus	st be filled.	Specif	y NetID or Us	erID of the User
Shibboleth ID*		@njedge.net		
First Name*				
Middle Name				
Last Name*				
Email*				
Role*	☐ Faculty ☐ Staff ☐ Stu	ident		
Institution*	NJEDge.Net			ection(s) that the user
Collections*	CART: The College of the Montclair State University Harry A. Sprague Library	Collection	can add vide	eos to
Upload needs ICM approval*	No ▼	Select 'Yes' if all vio	deos will have	to be approved before





Next Release

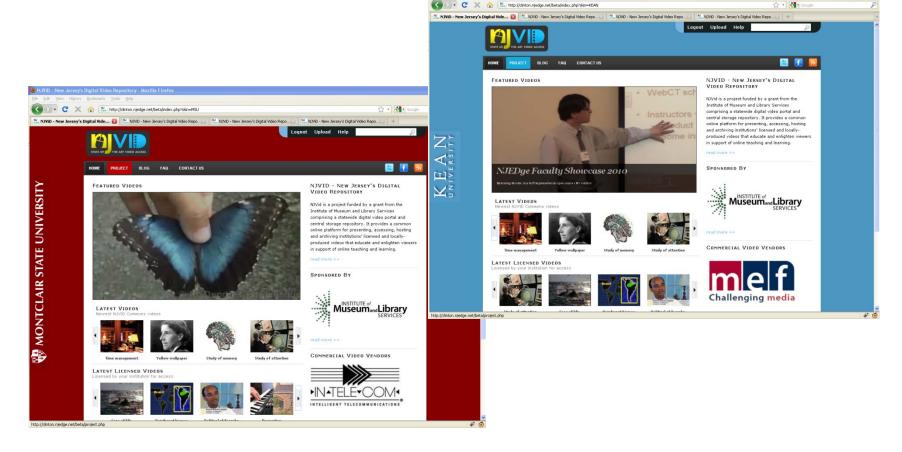
- New website that allows branding
 - Customizable website template for each institution.
 - Customized display of collections per Institution
- Upload from your webcam.
- Annotations of videos.

Future Release - support for streaming to iPads and iPhone





Custom templates



NJViD - New Jersey's Digital Video Repository - Mozilla Firefor





NJVid Annotation Tool

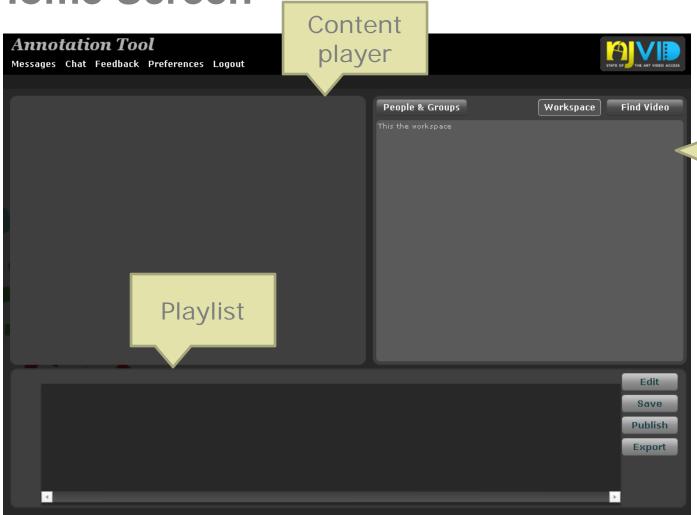
Features

- Use shibboleth for authentication/authorization
- Search NJVid for video
- Allow users to annotate video with text
- Create a playlist of annotations
- Share playlist with other users
- Publish playlist to NJVid repository





Home Screen

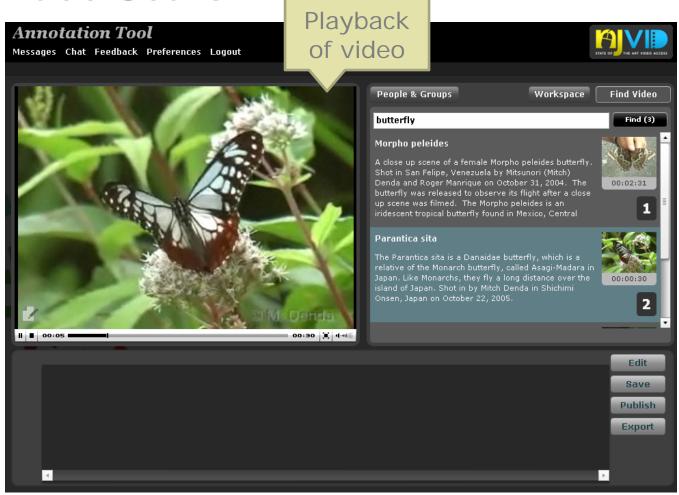


Management space





Video Search

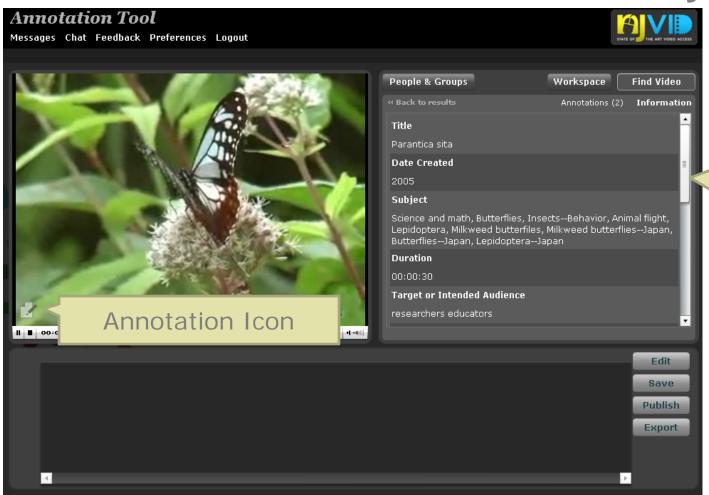


Searching for a video in NJVid





Video Metadata & Annotation Ability

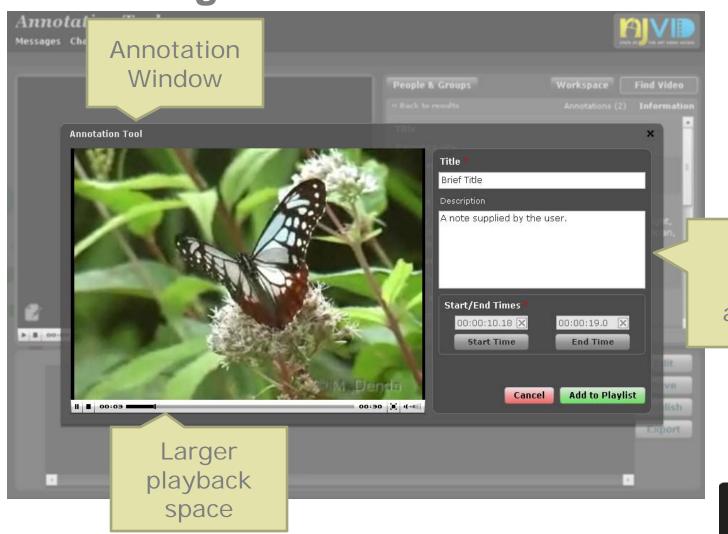


Video metadata





Annotating a Video

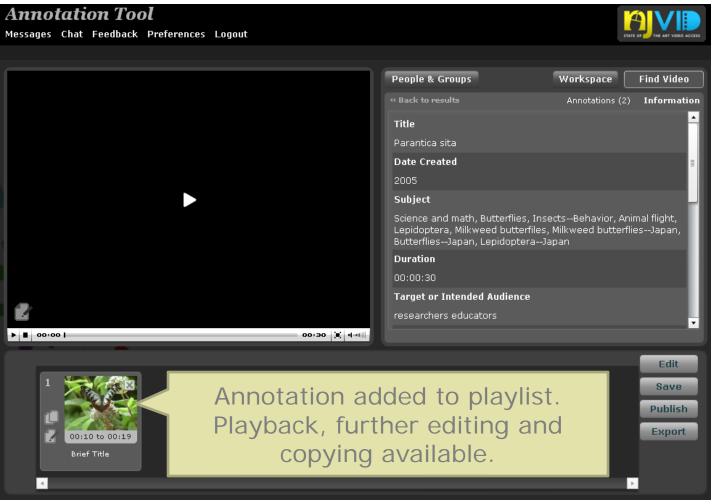


Area to provide annotation





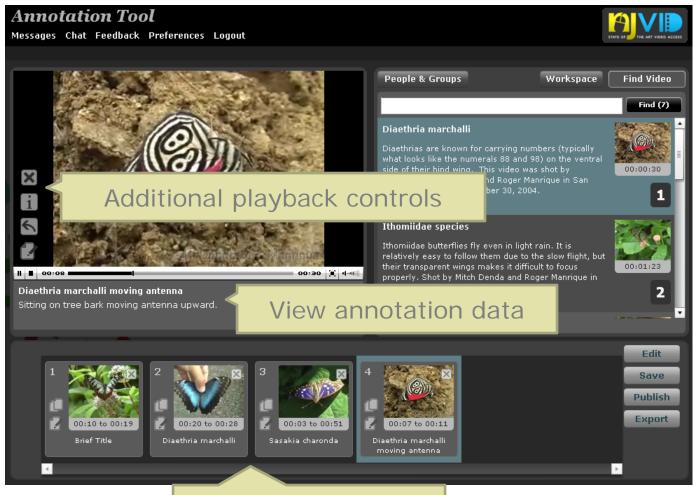
Adding Annotation to Playlist







Playback of Playlist





Multiple annotations



About the Tool

- Adobe Flash based tool
- Web Application
- Works on multiple operating systems in many web browsers
- Available late spring early summer





NJVid Links

- http://www.njvid.net
- http://www.fedoracommons.org
- http://shibboleth.internet2.edu
- http://www.njedge.net
- http://www.vale.org
- http://www.njdh.org

<u>millers@wpunj.edu</u> Sandra Miller <u>prupis@njedge.net</u> Sheri Prupis

