Access 2023 Managing **Digital Collections** in the Internet Archive

Kenton Good (he/him)
Head, Digital Production and
Preservation Services

Sarah Severson (she/her)
Digitization Librarian

Follow along with the slides bit.ly/access2023-digital-collections







Digitization at University of Alberta Library

Large scale digitization for 20 + years

Digitization Partnership with the Internet Archive since 2007

Internet Archive Scanning Centre at the Ualberta RCRF Facility since 2018

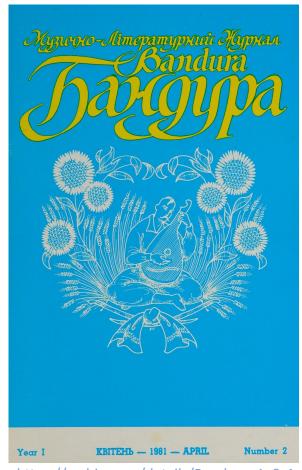


Why would you want to?



Why? What are the advantages?

- Contribution to a Large Collaborative Initiative
- Increased Discoverability of your content
- Technology is Free including processing, storage and transfer costs
- Unlimited Storage upload those large preservation files
- The Internet Archive Platform and API opens up interesting opportunities



https://archive.org/details/Bandura 1 3-4

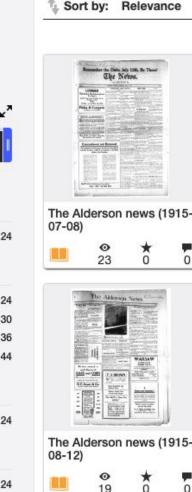
The Why in the UAlberta Context

- Technology end of life status for our main digital collection platform
- Budget and Staff reductions required us to put a pause on our development of a DAMS
- Already sizable portion of our digitized collections on the Internet Archive Platform
- Our solution for now non exclusive arrangements for access to our digitized collections
- Current work = Migrating nearly 67,000 Digitized Newspaper Issues (or 646,000 pages) to the Internet Archive Platform

Before and After











Date published ~

Creator

H.W., AMOREM

Weekly views ~ Title





Disclaimer

- We are not experts but have gained knowledge via learned experience
- Mistakes Were Made Trial and Error
- Some aspects of the Internet Archive platform are simply a *mystery*
- Although documentation exists, not everything you can do with the platform is documented

What you will need: Technology & Skills

- Internet Archive Account
- Web Browser and Spreadsheet
- Internet Archive Command Line Interface
- Bash Scripting
- [optional] Python Expertise (for working with the IA Python Library)

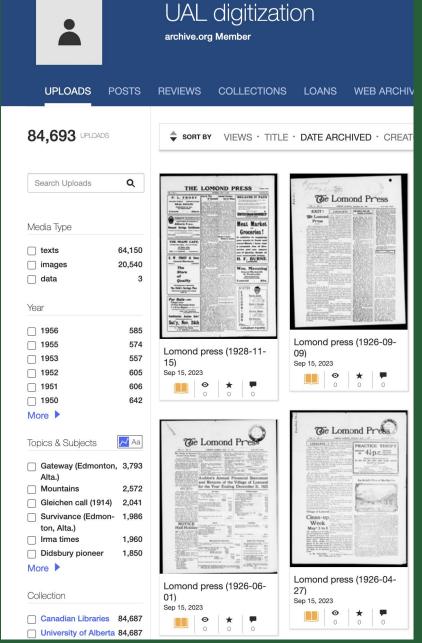
Internet Archive Command Line Interface

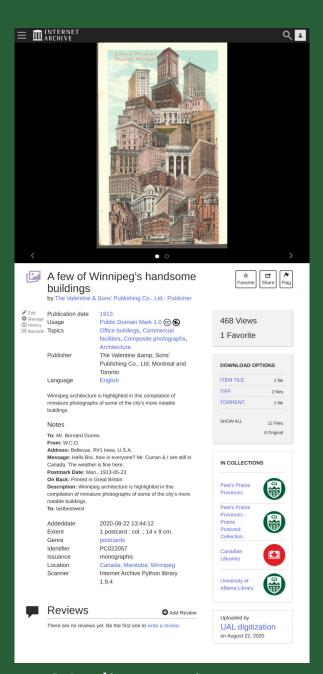
 Used for Uploading and Downloading, Editing Metadata, Generating lists of identifiers within collections

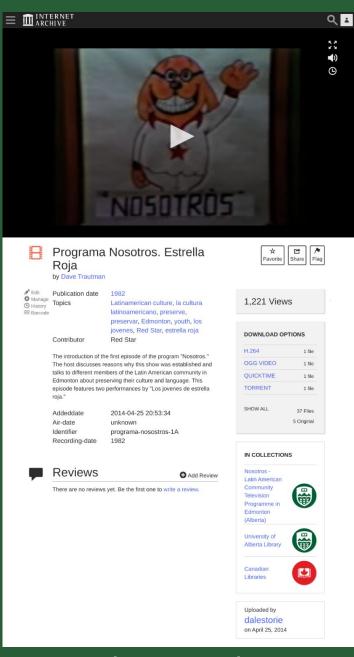
- Documented and reasonable learning curve
- Easy to install on MacOS and Linux
- Windows Hard to manage in more locked down IT environments
 - Windows Subsystem for Linux is your path forward

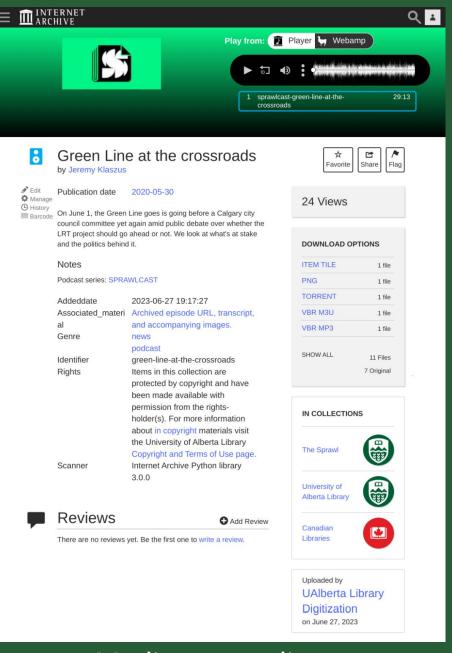
Uploading your digital content

- Anyone with a Internet Archive account can upload
- Supports image, text, audio/visual, data
- No mediation so files are available quickly
- No (documented) size restrictions
- Automatically creates derivative files





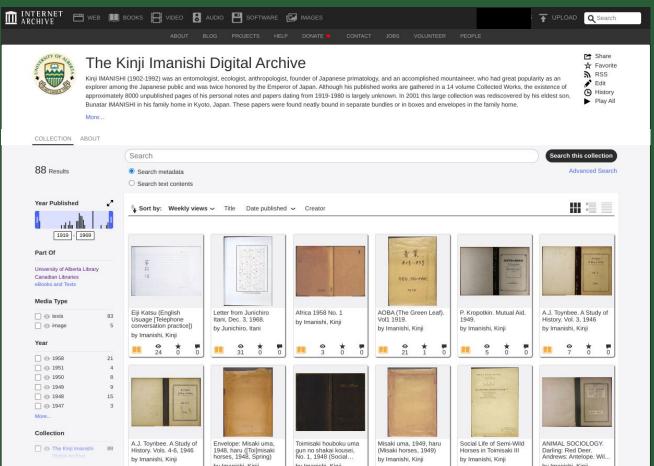




Rescue Digital Projects

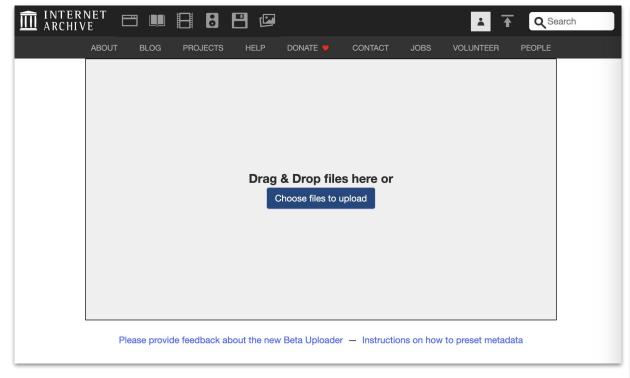


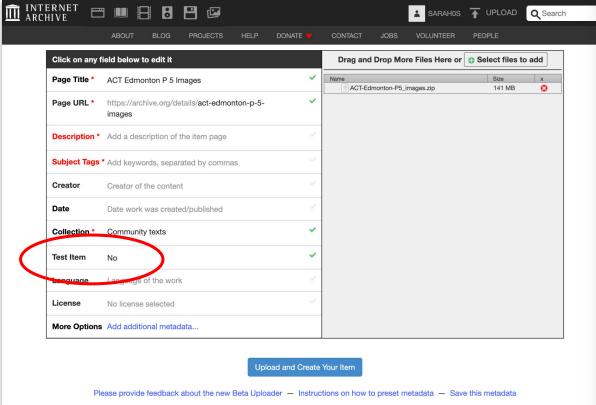
https://web.archive.org/web/20090302090115/http://tomcat.sunsite.ualberta.ca/lmanishi/



https://archive.org/details/imanishi

Uploading items manually





https://archive.org/upload/

Uploading in batches with a spreadsheet

	A	В	С	D	Е	F	G	Н		J
1	identifier	file	title	creator	language	date	box_number	call_number	mediatype	collection
2	Culverwell1983_visual	Culverwell1983_001_case.jpg	Final Visual Pres	Michael Culverw	eng	1983	B30379	UNCAT	image	ualberta_theses
3		Culverwell1983_001.jpg								
4		Culverwell1983_002_case.jpg								
5		Culverwell1983_002.jpg								
6	act-edmonton-p5-1990	act-edmonton-p5-1990_images.zip	Edmonton Trans	Edmonton Trans	eng	1990			texts	wcw
7										
8										
9										
10										

All you need is a spreadsheet + the files on your computer

Uploading in batches with python script

- Developed scripts using the IA
 Python Library for managing uploads at scale
 - Integration with our preservation knowledge bases
 - Automates metadata transformation from MODS to IA ready formatting

- Ability to manage both test and production uploads
- Integration with 3rd party libraries such as JHOVE to validate image files
- Error and Success Logging

Item history

Review when

- something was uploaded
- metadata was changed
- which account did those changes
- when the changes were made

Item History for N018322

Legend and row counts:

Waiting to run	0				
Running	1				
Waiting for admin	0				
Parked	0				
Other	0 22				
Finished					
server readonly tasks waiting for harddrive f					
disk readonly tasks waiting for rescue task					

I am an admin, hear me roar. (compact view)

Show me just my tasks | lastmod | all tasks | count all tasks in summary

(page drawn: PDT: 2023-10-06 10:04:28)

Search

Manage (?)
checked
tasks:



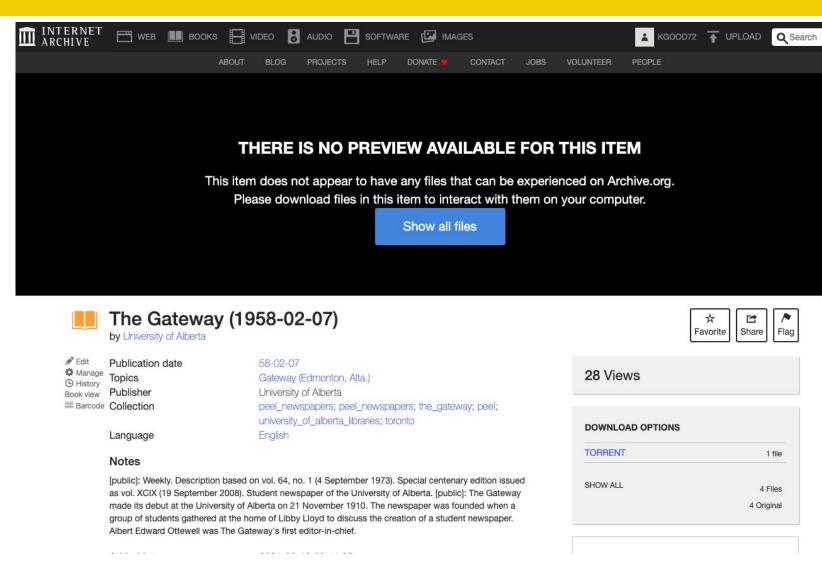


where am I in line?

identifier	task_id	server	cmd	submittime	submitter	args
N018322 - History Mgr	3918185463 🔲 🕕	ia601901 🔀	archive.php	(13.0 seconds)	UAlberta Library Digitization	done=nolo-check&from_url=
N018322 - History Mgr	3918185458	ia601901 🔀	archive.php	(13.0 seconds)	UAlberta Library Digitization	from_url=http://no_such_h
N018322 - History Mgr	3918076341	ia601901 🔀	modify_xml.php	(1.1 hour)	UAlberta Library Digitization	-target=reviews&-patch={"
N018322 - History Mgr	3914891515	ia601901 📈	modify_xml.php	(1.7 day)	RCAF.info	-target=reviews&-patch={"
N018322 - History Mgr	3293663883	ia601901 🔀	modify_xml.php	(1.3 year)	UAL digitization	-target=metadata&-patch=[
N018322 - History Mgr	3284578003	ia601901 🔀	modify_xml.php	(1.3 year)	UAL digitization	-target=metadata&-patch=[
N018322 - History Mgr	3268913662	ia601901 🔀	modify_xml.php	(1.4 year)	UAL digitization	-target=metadata&-patch=[
N018322 - History Mgr	2906184064	ia601901 🔀	modify_xml.php	(2.0 years)	UofA Metadata Team	-target=metadata&-patch=[
N018322 - History Mgr	1792935562	ia601901 🔀	archive.php	(3.3 years)	hank_b	shuffle=1&from_url=rsync:
N018322 - History Mgr	1680351451	ia601504 🔀	bup.php	(3.4 years)	UAL digitization	dir=/19/items/N018322⪯
N018322 - History Mgr	1680342270	iw600807 🔀	derive.php	(3.4 years)	UAL digitization	server_primary=ia601504.u
N018322 - History Mgr	1680331607	ia601504 📈	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1680327585	ia601504 🔀	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1680321847	ia601504 📈	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1675553092	ia601504 📈	bup.php	(3.4 years)	UAL digitization	dir=/19/items/N018322⪯
N018322 - History Mgr	1675544809	iw601702 🔀	derive.php	(3.4 years)	UAL digitization	server_primary=ia601504.u
N018322 - History Mgr	1675543561	ia601504 📈	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1675541178	ia601504 🔀	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1675539753	ia601504 📈	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1675538291	The state of the s	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1675536426	ia601504 🔀	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1675534972	ia601504 🔀	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=
N018322 - History Mgr	1675534895	ia601504 📈	archive.php	(3.4 years)	UAL digitization	done=bup-derive&from_url=

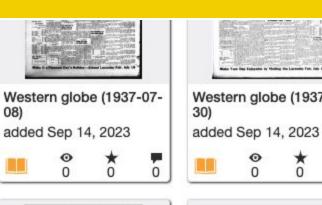
Common uploading errors & how to fix them

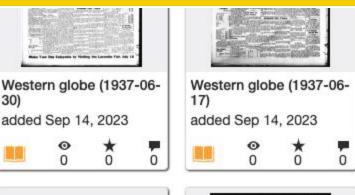
- Missing thumbnails
- No viewable or derived files

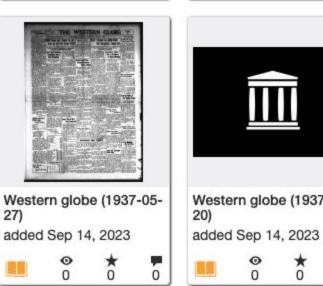


Missing Thumbnails

- Manual process of grabbing the first image file and reloading it via the Web Interface
- Creation of a Bash script to automate this process



















Western 06)

added S

Western 24)

added S

Derive Issues

- The Derive process is the Internet Archive process for creating the many derivative formats for each item
- Sometimes this process simply fails. This will result in missing derivative files and is often noticeable by a lack of a flip book view.

Item History for UAA-1974-169-635-003

(page drawn: PDT: 2023-10-20 15:50:29)

② Legend and row counts:

Waiting to run

Running

O
Waiting for admin
Parked

O
Other

O
Finished

server readonly -- tasks waiting for harddrive fix disk readonly -- tasks waiting for rescue task

I am an admin, hear me roar. (compact view)
Show me just my tasks | lastmod | all tasks | count all tasks in summary table
Search
Manage ② interrupt
checked
tasks:

where am I in line?

	note and in the control of the contr							
ì	identifier	task_id	server	cmd	submittime	submitter	args	
	UAA-1974-169-635-003 - History Mgr	3945136006	iw601404 🔀	derive.php	(3.2 hours)	UAlberta Library Digitization	nre=x&server_primary=ia60	
ì	UAA-1974-169-635-003 - History Mgr	3945424854	ia601507 🔀	archive.php	(30.0 seconds)	UAlberta Library Digitization	done=delete&from_url=rsyn	
	UAA-1974-169-635-003 - History Mgr	3945424539	ia601507 🔀	archive.php	(40.0 seconds)	UAlberta Library Digitization	from_url=http://no_such_h	
ĺ	UAA-1974-169-635-003 - History Mgr	3945424531	ia601507 🔀	archive.php	(40.0 seconds)	UAlberta Library Digitization	from_url=http://no_such_h	
	UAA-1974-169-635-003 - History Mgr	3945168938	ia601507 🔀	archive.php	(2.9 hours)	UAL digitization	from_url=http://no_such_h	

Derive Shared Queue

througheyeofneed0000brow_w1z5	(13.8 hours) aababon@innodata.com	-2
ngauruoragroveso0000park	(13.8 hours) associate-loida-sulit@archive.org	-2
conflictoflawsca0000bril_u7o2_08ed	(13.8 hours) associate-louiseviktoria-saligumba@archive.org	-2
bwb_W8-CBF-893	(13.7 hours) associate-maryrose-estose@archive.org	-2
womenbranchstori0000rich	(13.7 hours) associate-jenisa-lucernas@archive.org	-2
thermaldesignpri0021jerr	(13.6 hours) aababon@innodata.com	-2
isbn_9787010096278	(13.6 hours) associate-liziqing@archive.org	-2
isbn_007860141X	(13.6 hours) associate-jeanette-beleno@archive.org	-2
vaccinatorssmall0000jann	(13.5 hours) associate-carlagane-sarajena@archive.org	-2
villagebeyond0000livi	(13.5 hours) associate-carlagane-sarajena@archive.org	-2
prayerpartners0000town	(13.5 hours) associate-cecelia-atil@archive.org	-2
advancementkeepi0000bush	(13.4 hours) associate-shielamae-olmilla@archive.org	-2
oncoursestrategi00000na	(13.4 hours) associate-shielamae-olmilla@archive.org	-2
parakeetsfordumm0000mous_l0j1	(13.3 hours) associate-mercedes-densing@archive.org	-2
bwb_P8-ADA-252	(13.3 hours) associate-mercedes-densing@archive.org	-2
foi-digest_november-december-1973_15_6	(13.3 hours) associate-loriemae-randoy@archive.org	-2
constitutionalla0000sull_h5v8_19ed	(13.3 hours) associate-louiseviktoria-saligumba@archive.org	-2
booksfriendsbibl0000geri	(13.3 hours) associate-ruffamae-precillas@archive.org	-2

Examples of how to fix derive process issues

- Manually restarting the derive process within the problematic record from the history
- If the text quality within the scan is weak, it may be getting stuck at the OCR step - can fix by switching the OCR method
- We have created a custom Bash script to allow us to more easily fix derive problems after a large batch upload.

Managing your collections

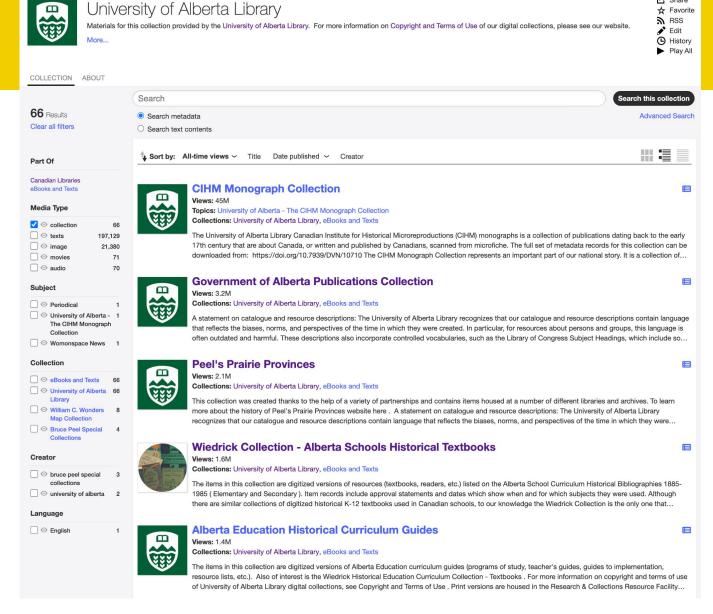
- Creating collections
- Adding files to an item
- Fixing mistakes by hiding or deleting items
- Managing metadata
- Query your collections
- Transcluding items or splitting them up

Creating collections

- As many as you'd like
- Can be nested but not hierarchically
- Email <u>info@archive.org</u> to request one

*If you don't include a collection on upload it will default into

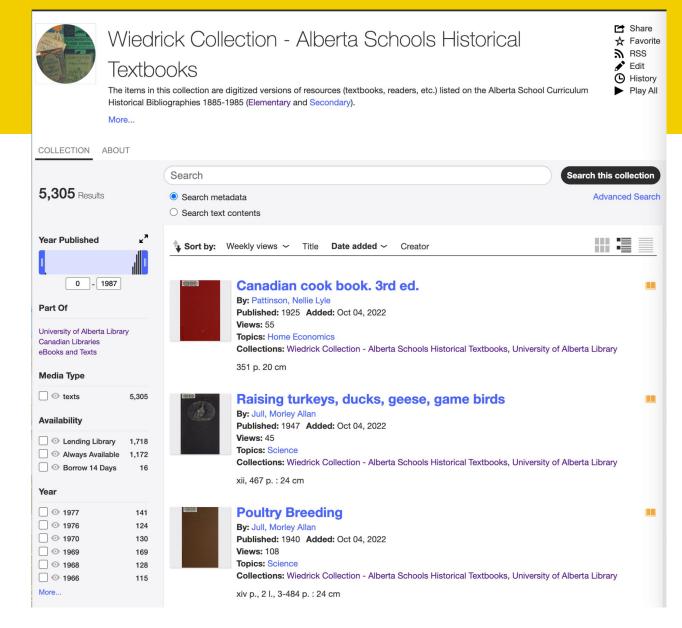
https://archive.org/details/openso
urce and only the uploader can
move it *



Share

The benefit of a collection

- Dedicated URL
- Space for a collection description and metadata
- *Much* easier to scope search
- Collection level statistics
- Permissions operate on a collection level

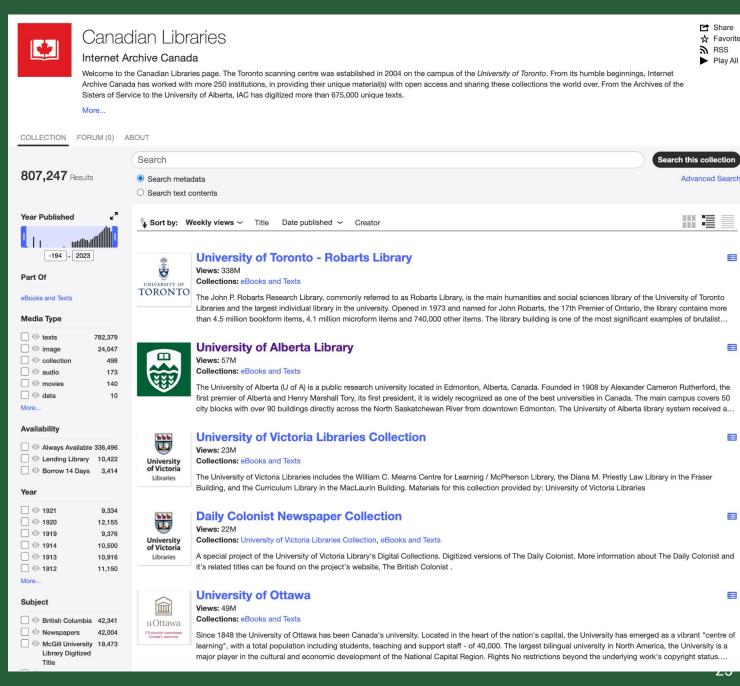


https://archive.org/details/ualbertawiedrick

Wait.

Why is the URL for the **Canadian Libraries** collection

https://archive.org/details /toronto?



 \blacksquare

Share

RSS

☆ Favorite

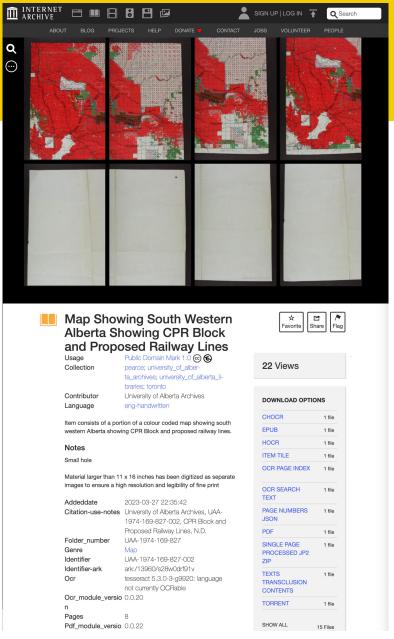
► Play All

Adding or changing files

Add files to an existing item

- transcriptions
- legacy ALTO metadata

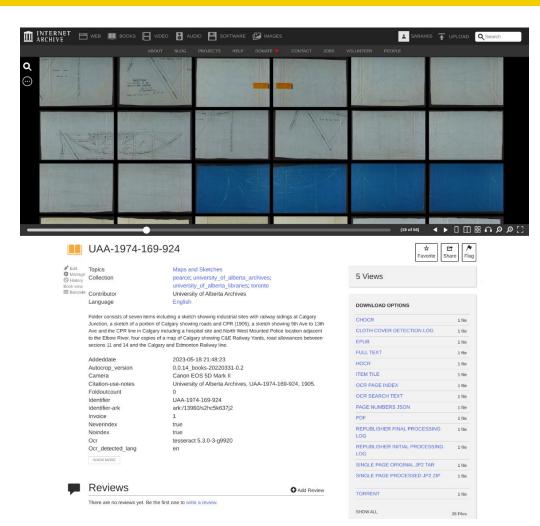
To change display files need to delete old item and reupload



Oops we made a mistake!

- Cannot delete an identifier or change
- Hide an item by adding metadata
 - neverindex=true
 - noindex=true
- Darking an item
- Deleting files

Darking an item https://archive.org/developers/tasks.html#darking-an-item
Deleting files https://archive.org/developers/internetarchive/cli.html#delete



Metadata in the Internet Archive

From

https://archive.org/developers/metadata-schema/#metadata-schema

All metadata for archive.org items are stored in <identifier>_meta.xml and <identifier>_files.xml.

- **meta.xml** file contains all of the item-level metadata for an item (e.g. title, description, creator, etc.)
- files.xml file contains all of the file-level metadata (e.g. track title, checksums, etc.).

More information on the Metadata API https://archive.org/developers/metadata.html

- You can have as many custom fields as you want
 - Typos in a field name will create a custom field!
- You cannot control where the metadata is shown in the record.
 - For example <u>licenseurl</u> is shown very high, but the <u>rights</u> field is often hidden under the fold
- Metadata fields and interface labels might be different.
 - For example subject = topics in the interface
- Some fields support rich text and hyperlinks
- Schema doc is not always up to date

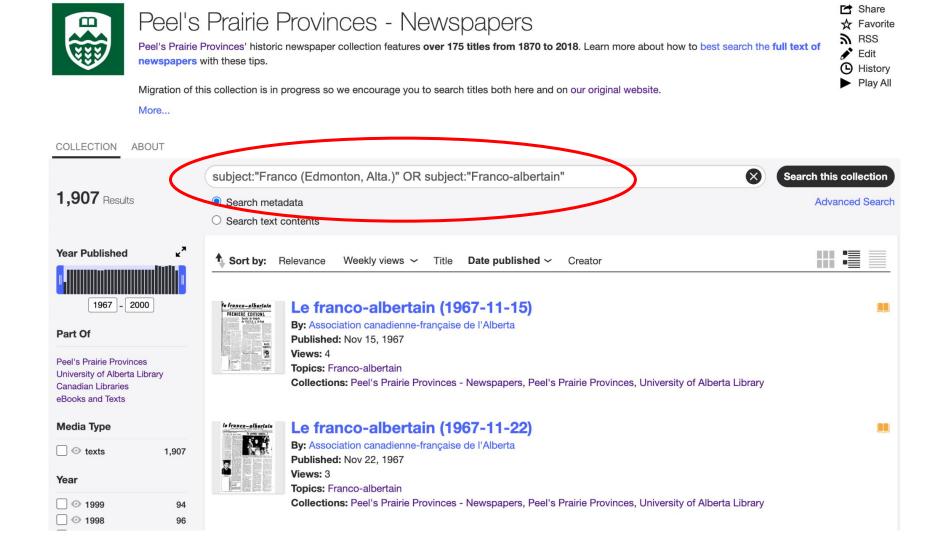
Modifying metadata in bulk

	A	В	С	D	E
1	identifier	title	year	noindex	neverindex
2	facultyoflawyb1974uofa	University of Alberta Faculty of Law yearbook (1974)	1974	REMOVE_TAG	REMOVE_TAG
3	facultyoflawyb1975uofa	University of Alberta Faculty of Law yearbook (1975)	1975	REMOVE_TAG	REMOVE_TAG
4	facultyoflawyb1976uofa	University of Alberta Faculty of Law yearbook (1976)	1976	REMOVE_TAG	REMOVE_TAG
5	facultyoflawyb1977uofa	University of Alberta Faculty of Law yearbook (1977)	1977	REMOVE_TAG	REMOVE_TAG
6	facultyoflawyb1978uofa	University of Alberta Faculty of Law yearbook (1978)	1978	REMOVE_TAG	REMOVE_TAG

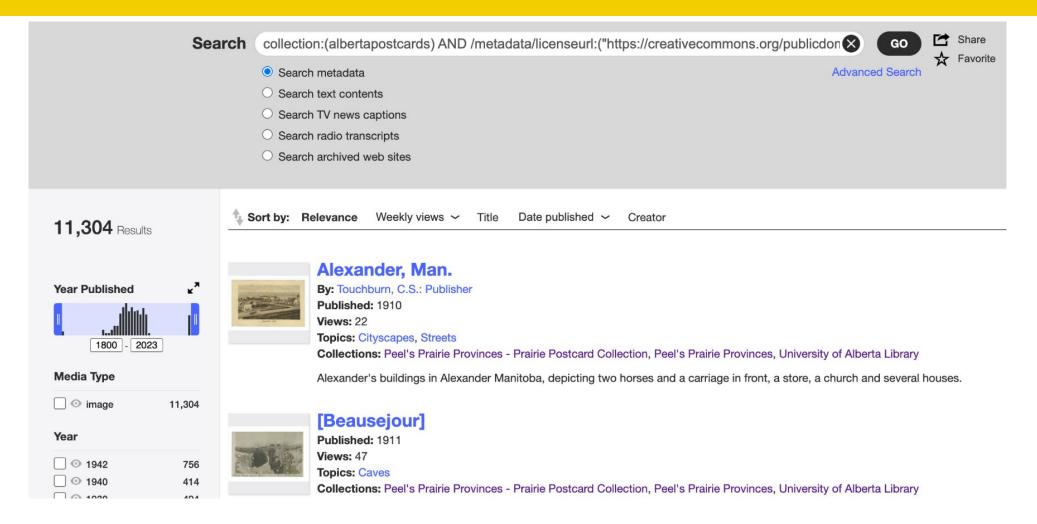
All you need is a spreadsheet!

via command line https://archive.org/developers/internetarchive/cli.html#modifying-metadata-in-bulk
in bulk using spreadsheets https://archive.org/developers/internetarchive/cli.html#modifying-metadata-in-bulk

Collection search via the user interface



Collection search supports complex queries



Anyone can search via the command line

ia search 'collection:pearce' --itemlist > pearce.txt

Gallery mode

- Link directly to a specific page
- Mobile friendly

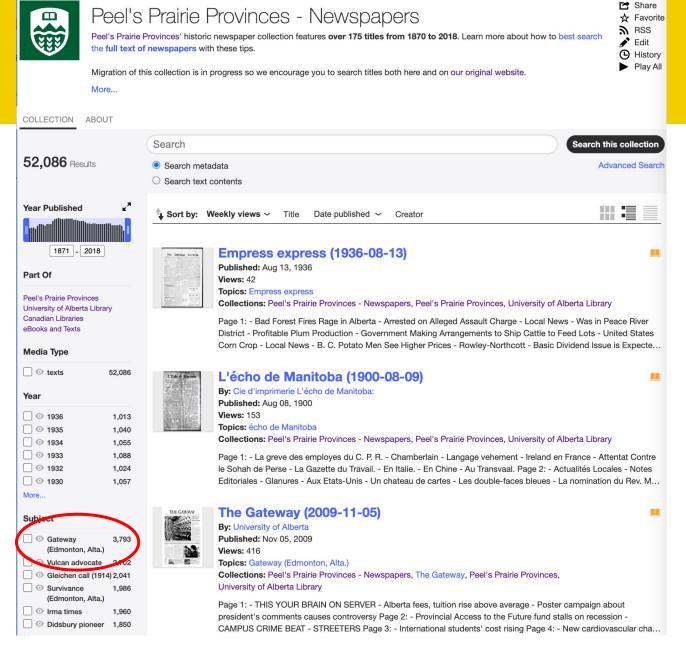


https://archive.org/details/birdsofalberta00stan/page/n1/mode/2up?view=theater

Filters

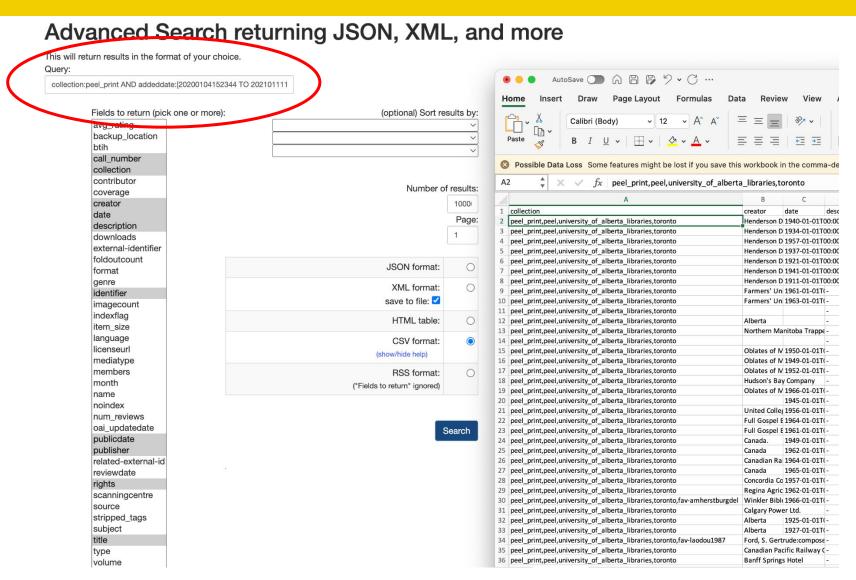
Popular with users

Known issue where filters, like subject, don't support special characters



Query collections

- Can do a lot with Advanced Search
- Don't need permissions
- limited in what fields it can query and the output data



https://archive.org/advancedsearch.php

Find out who favourites your items!

	A	В	С	D
1	collection	identifier	title	creator (
2	peel_print,peel,university_of_alberta_libraries,toronto,fav-pere432	N002840	Fiftieth anniv	Thistle Curling
3	peel_print,peel,university_of_alberta_libraries,toronto,fav-swswswswswsyfav-pere432	N002841	Seventy-fifth	Thistle Curling
4	peel_print,peel,university_of_alberta_libraries,toronto	N002842	Canada is co	Alberta Whea
5	peel_print,peel,university_of_alberta_libraries,toronto	N002843	Fort Garry Hi	Hudson's Bay
6	peel_print,peel,university_of_alberta_libraries,toronto	N002844	Claresholm,	Men's Club (C
7	peel_print,peel,university_of_alberta_libraries,toronto,fav-dougdonalda,fav-mihart,fav-bienlala,fav-mjdolan	N002959	The golden t	rail - :Lions Clu
8	peel_print,peel,university_of_alberta_libraries,toronto	N002849	O.S.A magaz	ine, vol. 1, no :
9	peel_print,peel,university_of_alberta_libraries,toronto	N002850	The A.S.A. m	agazine, Mar :
10	peel_print,peel,university_of_alberta_libraries,toronto	N002851	The A.S.A. m	agazine, Mar :
11	peel_print,peel,university_of_alberta_libraries,toronto,fav-ema45	N002852	The A.S.A. m	Williams, G. 2
12	peel_print,peel,university_of_alberta_libraries,toronto	N002853	O.S.A magaz	Huffman, Joy 1
13	peel_print,peel,university_of_alberta_libraries,toronto	N002854	O.S.A magaz	Swallow, H.
14	peel_print,peel,university_of_alberta_libraries,toronto	N002855	O.S.A magaz	Westminster:
15	peel_print,peel,university_of_alberta_libraries,toronto	N002856	O.S.A magaz	Peach, Jack 2
16	peel_print,peel,university_of_alberta_libraries,toronto	N002857	O.S.A magaz	Brown, Marg 2
17	peel_print,peel,university_of_alberta_libraries,toronto	N002858	O.S.A magaz	Smith, Stank 1
18	peel_print,peel,university_of_alberta_libraries,toronto	N002859	O.S.A magaz	Boese, Sam, 1
19	peel_print,peel,university_of_alberta_libraries,toronto	N002860	O.S.A magaz	Boese, Sam, 1

Transcluding Items

Split up items after upload programmatically

Maintains relationship in metadata

transcludes ←→transcluded-by

We use when scanning larger folder of items to save money on digitization set up costs

Scan large groups of items with minimal metadata for later enhancement

Example: https://archive.org/details/UAA-1974-169-051-153



UAA-1974-169-051-153

Manage
⊕ History
Book view
■ Barcode

Lusage
Topics
Collect

Usage Topics Public Domain Mark 1.0 @ 6

Maps, Charts & Plans

pearce; university_of_alberta_archives; university_of_alber-

ta_libraries; toronto

Contributor University of Alberta Archives

Language English

Folder consists of thirty-two items including a map of railroads in Washing State, the Nova Scotian newspaper (December 6 1847), The Calgary Herald newspaper broadsheets (January, 1923), statistics relating to railway distances to various location from Edmonton & Calgary (1911), newspaper clippings including an address to the City of Calgary by Mayor Lucas concerning a small pox outbreak (1892) and a story about Medicine Hat AB, Facts for Electors for AB legislative assembly sheet and accompanying envelope, a Southern Alberta Pioneers & Oldtimers Association certificate, a map of Northern Alberta (1922), a Department of Mines Geologic Survey outline map of Southern AB Foothills (1918), a listing of USA and Canada by-product coke ovens, a rubric (and duplicate) showing detailed company information about USA & Canada Coke Ovens (1919), annotated maps of the lower Fraser Valley BC showing home oil leases and log chart (& duplicate) of the No.1 Oil Well (Sparton Oil) Vancouver BC, an oil records map showing anticline of Calgary oilfields, a plan of the Calgary Post-Office & fence enclosing the property (1898), charts showing stock train records and number of stock shipped & handled from various areas in Western Canada via HC McMullen General Livestock Agent Calgary (1909), two graphs showing Calgary & Edmonton Centres (1918), a map of a propsed storage basin on Elbow River (1912), a chart showing AB Government Telephones expenditures & receipts (1907-1916), a map of Southern Alberta Moose Mountain Region "Disturbed Belt" (1905), a chart by the Economic and Development Commission showing agricultural and other statistics of Canada's three prairie provinces (1916) and a map showing Manitoba, Saskatchewan and Alberta (1916).

Transcluded-by

Tts version

UAA-1974-169-051-001;UAA-1974-169-053-002;UAA-1974-169-057-001;UAA-1974-169-061-001;UAA-1974-169-079-002;UAA-1974-169-085-001;UAA-1974-169-131-002;UAA-1974-169-085-002;UAA-1974-169-142-001;UAA-1974-169-079-001;UAA-1974-169-131-004;UAA-1974-169-085-003;UAA-1974-169-097-001;UAA-1974-169-141-001;UAA-1974-169-131-003;UAA-1974-169-098-002;UAA-1974-169-104-001;UAA-1974-169-153-001;UAA-1974-169-153-001;UAA-1974-169-153-003;UAA-1974-169-153-005;UAA-1974-169-153-005;UAA-1974-169-153-005;UAA-1974-169-153-005;UAA-1974-169-153-005;UAA-1974-169-153-005;UAA-1974-169-088-001;UAA-1974-169-089-001;UAA-1974-169-053-

001;UAA-1974-169-131-001 5.3-initial-162-g77a354a7

Year 1847 - 1922

Access Options

- Controlled Digital Lending
- Print Disabilities collection
- Collaborative collections

Controlled Digital Lending

- User can borrow items for 1-hour or 14-days (limited)
- Need a IA account

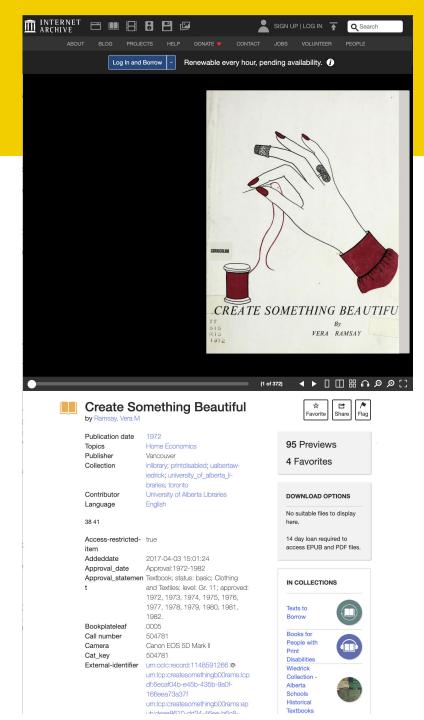
Item has the following metadata

Access-restricted-item=true

Item automatically included in

- Texts to Borrow
- Books for People with Print Disabilities collections

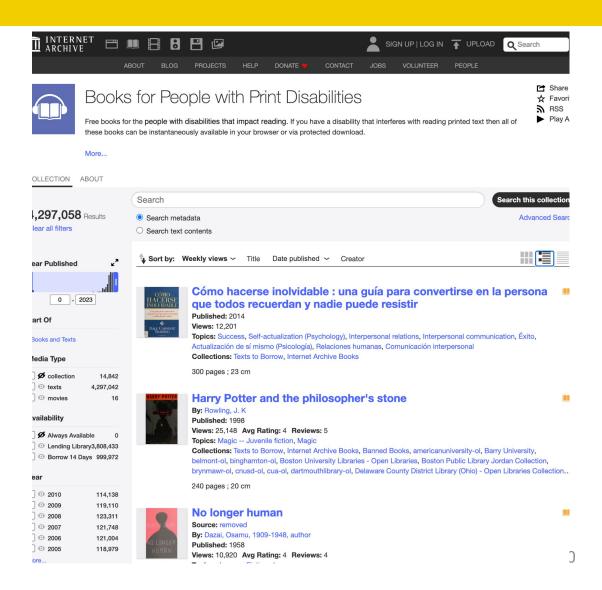
https://archive.org/details/createsomethingb00rams



Print Disabilities Collection

The Internet Archive includes a very large collection (more than 1.9 million) of in-copyright books that can be borrowed online by users with a perceptual disability.

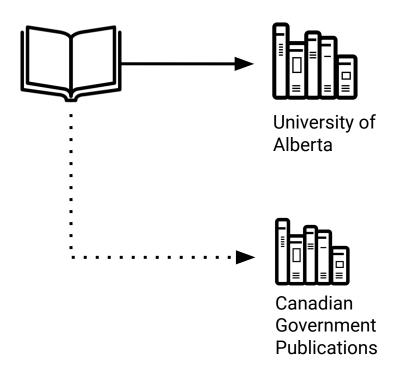
The University of Alberta Library and our accessibility and accommodation services office are registered as a "qualifying authority" which means they approve users access to these collections based on accessibility need.



Collaborative collections

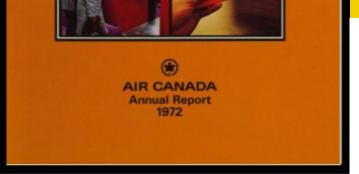
Easy to set up large cross institutional collections

- Canadian Government Publications
 Collections
 - University of Alberta
 - University of Toronto
 - · Ministry of the Environment, Conservation and Parks
 - Hamilton Public Library
- The Medical Heritage Library
- Biodiversity Heritage Library



Downloading your collections

- · Why?
 - A copy outside of the Internet Archive platform
 - Backup of any derivatives that the Internet Archive platform created - ie. PDF files to upload to another discovery system.
 - Package your content for preservation

















Air Canada (1972)

by Air Canada

Manage (1) History

Collection

larc; university_of_alberta_libraries;

toronto

Contributor University of Alberta Library

■ Barcode Language English

> Headquarters: Montreal QC; Former names: Trans-Canada Air Lines;; June 1, 1964 - name changed from Trans-Canada Air Lines to Air Canada;

July 6, 2000 - acquired Canadian Airlines Corporation;

Notes

Bilingual material; French bound in reverse. Some text loss due to tight binding on page 22.

Addeddate 2023-03-16 06:52:21

Autocrop_version 0.0.14_books-20220331-0.2

USB PTP Class Camera Camera

Foldoutcount 0



Favorite





17 Views

DOWNLOAD OPTIONS

CHOCR	1 file
CLOTH COVER	1 file
DETECTION LOG	
EPUB	1 file
FULL TEXT	1 file
HOCR	1 file
ITEM TILE	1 file
OCR PAGE INDEX	1 file

Files for AirC0077_1972

Name	Last modified		Size
↑ Go to parent directory			
logs/	15-Mar-2023	21:24	-
AirC0077_1972.pdf	16-Mar-2023	06:50	6.7M
AirC0077_1972_archive.torrent	09-Sep-2023	08:06	7.9K
AirC0077_1972_chocr.html.gz	16-Mar-2023	06:43	1.3M
AirC0077_1972_cloth_detection.log	16-Mar-2023	06:51	743.0
AirC0077_1972_djvu.txt	16-Mar-2023	06:44	93.9K
AirC0077_1972_djvu.xml	16-Mar-2023	06:44	1.2M
AirC0077_1972_events.json	16-Mar-2023	06:23	58.0B
AirC0077_1972_extrameta.json	15-Mar-2023	21:23	54.0B
AirC0077_1972_files.xml	09-Sep-2023	08:06	11.0K
AirC0077_1972_hocr.html	16-Mar-2023	06:43	2.3M
AirC0077_1972_hocr_pageindex.json.gz	16-Mar-2023	06:44	587.0
AirC0077_1972_hocr_searchtext.txt.gz	16-Mar-2023	06:44	44.7K
AirC0077_1972_jp2.zip (View Contents)	16-Mar-2023	06:35	47.4M
AirC0077_1972_meta.log	15-Mar-2023	21:28	228.0
AirC0077_1972_meta.sqlite	16-Mar-2023	06:23	40.0K
AirC0077_1972_meta.xml	09-Sep-2023	08:06	2.4K
AirC0077_1972_metasource.xml	10-Feb-2023	20:16	228.0
AirC0077_1972_orig_jp2.tar (View Contents)	16-Mar-2023	06:23	103.0
AirC0077_1972_page_numbers.json	16-Mar-2023	06:44	7.3K
AirC0077_1972_repub_final.log	16-Mar-2023	06:51	13.8K
AirC0077_1972_repub_initial.log	15-Mar-2023	21:41	27.0B
AirC0077_1972_scandata.xml	16-Mar-2023	06:51	54.4K
AirC0077_1972_title_detection.log	16-Mar-2023	06:44	538.0
AirC0077_1972_toc.xml	16-Mar-2023	06:44	9.1K
ia_thumb.jpg	16-Mar-2023	06:52	12.4K

Command Line Download

ia download AirC0077_1972

ia_thumb.jpg	Mar 16, 2023, 12:52 AM
AirC0077_1972_archive.torrent	Sep 9, 2023, 2:06 AM
AirC0077_1972_chocr.html.gz	Mar 16, 2023, 12:43 AM
AirC0077_1972_cloth_detection.log	Mar 16, 2023, 12:51 AM
AirC0077_1972_djvu.txt	Mar 16, 2023, 12:44 AM
AirC0077_1972_djvu.xml	Mar 16, 2023, 12:44 AM
AirC0077_1972_events.json	Mar 16, 2023, 12:23 AM
AirC0077_1972_extrameta.json	Mar 15, 2023, 3:23 PM
AirC0077_1972_files.xml	Dec 31, 1969, 5:00 PM
AirC0077_1972_hocr_pageindex.json.gz	Mar 16, 2023, 12:44 AM
AirC0077_1972_hocr_searchtext.txt.gz	Mar 16, 2023, 12:44 AM
AirC0077_1972_hocr.html	Mar 16, 2023, 12:43 AM
AirC0077_1972_jp2.zip	Mar 16, 2023, 12:35 AM
AirC0077_1972_meta.log	Mar 15, 2023, 3:28 PM
AirC0077_1972_meta.sqlite	Mar 16, 2023, 12:23 AM
AirC0077_1972_meta.xml	Sep 9, 2023, 2:06 AM
AirC0077_1972_metasource.xml	Feb 10, 2023, 1:16 PM
l AirC0077_1972_orig_jp2.tar	Mar 16, 2023, 12:23 AM
AirC0077_1972_page_numbers.json	Mar 16, 2023, 12:44 AM
AirC0077_1972_repub_final.log	Mar 16, 2023, 12:51 AM
AirC0077_1972_repub_initial.log	Mar 15, 2023, 3:41PM
AirC0077_1972_scandata.xml	Mar 16, 2023, 12:51 AM
AirC0077_1972_title_detection.log	Mar 16, 2023, 12:44 AM
Marcon AirC0077_1972_toc.xml	Mar 16, 2023, 12:44 AM
■ AirC0077_1972.pdf	Mar 16, 2023, 12:50 AM
■ logs	Today, 10:01 AM
15-16 (MBC)	

Fun with Downloading

Downloading from Item List

ia download --itemlist itemlist.txt

Download from other collections

ia download --search
'collection:GratefulDead' --glob="*.mp3"

```
[sarah@Sarahs-iMac-2 desktop % ia download --itemlist conu.txt
concordia-university-magazine-2005-sept (1/15):
 downloading Concordia_University_Magazine_2005_Sept.pdf: 100%|■| 9.86M/9.86M [0
 downloading Concordia University Magazine 2005 Sept chocr.html.gz: 100% | ■ | 2.12
 downloading Concordia_University_Magazine_2005_Sept_djvu.txt: 0.00iB [00:00, ?iB
 downloading Concordia_University_Magazine_2005_Sept_djvu.txt: 158kiB [00:00, 1.9
1MiB/s]
 downloading Concordia_University_Magazine_2005_Sept_djvu.xml: 0.00iB [00:00, ?iB
 downloading Concordia_University_Magazine_2005_Sept_djvu.xml: 278kiB [00:00, 2.5
 downloading Concordia_University_Magazine_2005_Sept_djvu.xml: 0.99MiB [00:00, 4.
 downloading Concordia University Magazine 2005 Sept_djvu.xml: 2.02MiB [00:00, 6.
25MiB/s]
 downloading Concordia_University_Magazine_2005_Sept_hocr.html: 0.00iB [00:00, ?i
 downloading Concordia_University_Magazine_2005_Sept_hocr.html: 667kiB [00:00, 4.
 downloading Concordia_University_Magazine_2005_Sept_hocr.html: 2.05MiB [00:00, 7
 downloading Concordia_University_Magazine_2005_Sept_hocr.html: 4.02MiB [00:00, 1
2.9MiB/s]
 downloading Concordia University Magazine 2005 Sept hocr pageindex.json.gz: 100%
 downloading Concordia University Magazine 2005 Sept hocr searchtext.txt.gz: 100%
 downloading Concordia University Magazine 2005 Sept jp2.zip: 100%|■| 81.8M/81.8M
 downloading Concordia University Magazine 2005 Sept page numbers.json: 100%|■| 6
 downloading Concordia_University_Magazine_2005_Sept_scandata.xml: 0.00iB [00:00,
 downloading Concordia University Magazine 2005 Sept scandata.xml: 14.6kiB [00:00
 19.6MiB/s]
 downloading __ia_thumb.jpg: 100%| | 100%| 21.8k/21.8k [00:00<00:00, 1.11MiB/s]
 downloading concordia-university-magazine-2005-sept archive.torrent: 100%| | 7.7
 downloading concordia-university-magazine-2005-sept_files.xml: 0.00iB [00:00, ?i
 downloading concordia-university-magazine-2005-sept files.xml: 6.85kiB [00:00, 9
.03MiB/s]
 downloading concordia-university-magazine-2005-sept_meta.sqlite: 100%|■| 28.0k/2
 downloading concordia-university-magazine-2005-sept_meta.xml: 0.00iB [00:00, ?iB
 downloading concordia-university-magazine-2005-sept_meta.xml: 2.02kiB [00:00, 2.
83MiB/s]
concordian-1974-nov-4 (2/15):
 downloading Concordian-1974-Nov-4.pdf: 100%| ■ | 10.6M/10.6M [00:00<00:00, 11.7MiB
 downloading Concordian-1974-Nov-4_chocr.html.gz: 100%|■| 865k/865k [00:00<00:00,
 downloading Concordian-1974-Nov-4_djvu.txt: 59.3kiB [00:00, 3.17MiB/s]
 downloading Concordian-1974-Nov-4_djvu.xml: 816kiB [00:00, 1.67MiB/s]
 downloading Concordian-1974-Nov-4_hocr.html: 1.63MiB [00:00, 6.08MiB/s]
 downloading Concordian-1974-Nov-4_hocr_pageindex.json.gz: 100%| ■ | 131/131 [00:00
 downloading Concordian-1974-Nov-4 horr searchtext.txt.gz: 100% ■ 25.5k/25.5k [0
 downloading Concordian-1974-Nov-4 jp2.zip: 100% | ■ | 22.5M/22.5M [00:04<00:00, 5.0
 downloading Concordian-1974-Nov-4 page numbers.ison: 100%| ■ | 1.27k/1.27k [00:00<
 downloading Concordian-1974-Nov-4 scandata.xml: 2.72kiB [00:00, 3.42MiB/s]
 downloading __ia_thumb.jpg: 100%| 24.8k/24.8k [00:00<00:00, 1.34MiB/s]
 downloading concordian-1974-nov-4_archive.torrent: 100%|■| 4.94k/4.94k [00:00<00
 downloading concordian-1974-nov-4_files.xml: 6.45kiB [00:00, 1.40MiB/s]
 downloading concordian-1974-nov-4_meta.sqlite: 100%| ■ | 20.0k/20.0k [00:00<00:00,
 downloading concordian-1974-nov-4_meta.xml: 2.27kiB [00:00, 3.60MiB/s]
concordian-1973-nov-19 (3/15):
 downloading Concordian-1973-Nov-19.pdf: 100%|■| 16.0M/16.0M [00:01<00:00, 11.2Mi
 downloading Concordian-1973-Nov-19_chocr.html.gz: 100%| ■ | 1.10M/1.10M [00:00<00:
```

- Many Options
- Organize your downloads into smaller batches
- Speed of downloading is variable
- Authenticated vs Unauthenticated
- Thinking about Incremental Backups

Downloading Lessons

 April and May 2023 we downloaded approximately 38TB or 5.7 million files of our data from Internet Archive

ia download --search

collection:university_of_alberta_libraries'

What's the Downside?

- Limited Change Management. Ultimately No Control changes in interface, added metadata to your items
- Limited Communication on outages and platform slowness
- Limited Granularity with User Permissions all or nothing
- Shared Infrastructure you can and will be impacted on what others are doing at any given moment on the platform

Thank you!

Current Team Former Team

Emily Zheng Danoosh Davoodi

Henry Zhang Mohsen Kardar

John Huck Tianyu Zhang

Logan Thienes

Luc Fagnan

Piyapong Charoenwattana

Sean Gleason

Sharon Farnel

Resources

Caleb McDaniel. Data Mining the Internet Archive Collection. https://doi.org/10.46430/phen0035

Ian Milligan and James Baker. Introduction to the Bash Command Line.

https://doi.org/10.46430/phen0037

Questions?

sarah.severson@ualberta.ca or kenton.good@ualberta.ca

Internet Archive Canada

Loren Fantin (she/her/elle), Special Projects & Strategic Initiatives Lead loren@archive.org

