

Accessibility of Content in Institutional Repositories

Going Beyond Open Access

Texas Conference on Digital Libraries
May 17, 2018
Austin, Texas



Presenters

Colleen Lyon

- Scholarly Communications Librarian, University of Texas at Austin

Christopher Deems

- Recent MSIS Graduate, UT Austin iSchool; Systems and Technology Librarian, Ohio Northern University

Laura Waugh

- Digital Collections Librarian, Texas State University

Nerissa Lindsey

- Catalog Librarian, Texas A&M International University

University of Texas at Austin



TEXAS

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Berkeley Will Delete Online Content

Starting March 15, the university will begin removing more than 20,000 video and audio lectures from public view as a result of a Justice Department accessibility order.

By [Carl Straumsheim](#) // March 6, 2017

120 COMMENTS

Submission

Works submitted to Texas ScholarWorks (TSW) should fulfill the requirements outlined below. For instructions on how to submit works to TSW, please see the Help section or contact TSW staff.

- Works must be produced or sponsored by University of Texas at Austin faculty, staff, or students. Submission of works produced by individual undergraduate students must be sponsored by a faculty member or department.
- Works must be submitted to a Collection. Submitters need authorization to submit works to a Collection. For information on gaining authorization, please see *How do I gain authorization to submit to Texas ScholarWorks?* in our FAQs.
- Works must reflect the nature of the Collection to which they are submitted. All submitted works may be reviewed by the Collection or Repository Curator. Please see the Collections Policy for more information.
- Works must be in digital form. Although any digital format will be accepted, submission in a recommended file format is strongly encouraged to facilitate long-term preservation.
- Works may be comprised of individual or multiple files, but each work must have at least one file associated with it. Metadata only records are not permitted. Individual files over approximately 700 MB in size may require staff assistance to upload. For submission of files larger than 700 MB, please contact the Repository Curator
- Works should be ready for dissemination and copyright owners must be able to grant non-exclusive rights to distribute and preserve the works. Please note that copyright owners retain copyright; see the Copyright and Licensing Policy for more information.
- Any audio or video content should have captions or an associated transcript to facilitate accessibility.
- Any text-based files should have searchable text or an associated text file.
- Works may be submitted individually or in batches of at least 100 items. Batch loads require special programming and scheduling. For batch submissions, please contact the Repository Curator.



UT Austin

- Our initial focus is A/V content
- Export content from TSW and sort for A/V
- Put in proposal to pay for captioning of existing library managed content (about 1400 items)
 - Proposal approved in March 2018 and we've just started the workflows for getting this done
 - Rough estimate of cost is \$20,000

UT Austin


TSW_LibraryAVcontent_for_captioning ☆

File Edit View Insert Format Data Tools Add-ons Help Last edit was made yesterday at 9:48 AM by Daniel Jacobs

collection									
	A	B	C	D	E	F	G	H	I
1	collection	title	creator	handle	handle url	mimetype	runtime (min	notes	Filename
2	Clifford Antone Lectures	Clifford Antone Lecture Series, part 1 of 12	Antone, Clifford	2152/13635	https://repositories.lib.utexas.edu/handle/2152/13635	video/mp4v-es	0:23:40	PRIORITY	txu-fal-antone-01-pt1of12 mp4
3	Clifford Antone Lectures	Clifford Antone Lecture Series, part 1 of 12	Antone, Clifford	2152/13635	https://repositories.lib.utexas.edu/handle/2152/13635	video/mp4v-es	0:27:24	PRIORITY	txu-fal-antone-01-pt2of2 mp4
4	Clifford Antone Lectures	Clifford Antone Lecture Series, part 2 of 12	Antone, Clifford	2152/13636	https://repositories.lib.utexas.edu/handle/2152/13636	video/mp4v-es	0:28:16	PRIORITY	txu-fal-antone-02-pt1of2 mp4
5	Clifford Antone Lectures	Clifford Antone Lecture Series, part 2 of 12	Antone, Clifford	2152/13636	https://repositories.lib.utexas.edu/handle/2152/13636	video/mp4v-es	0:29:14	PRIORITY	txu-fal-antone-02-pt2of2 mp4
6	Clifford Antone Lectures	Clifford Antone Lecture Series, part 3 of 12	Antone, Clifford	2152/13638	https://repositories.lib.utexas.edu/handle/2152/13638	video/mp4v-es	0:19:10	PRIORITY	txu-fal-antone-03-pt1of3 mp4
7	Clifford Antone Lectures	Clifford Antone Lecture Series, part 3 of 12	Antone, Clifford	2152/13638	https://repositories.lib.utexas.edu/handle/2152/13638	video/mp4v-es	0:26:17	PRIORITY	txu-fal-antone-03-pt2of3 mp4
8	Clifford Antone Lectures	Clifford Antone Lecture Series, part 3 of 12	Antone, Clifford	2152/13638	https://repositories.lib.utexas.edu/handle/2152/13638	video/mp4v-es	0:17:31	PRIORITY	txu-fal-antone-03-pt3of3 mp4
9	Clifford Antone Lectures	Clifford Antone Lecture Series, part 4 of 12	Antone, Clifford	2152/13646	https://repositories.lib.utexas.edu/handle/2152/13646	video/mp4v-es	0:21:48	PRIORITY	txu-fal-antone-04-pt1of3 mp4
10	Clifford Antone Lectures	Clifford Antone Lecture Series, part 4 of 12	Antone, Clifford	2152/13646	https://repositories.lib.utexas.edu/handle/2152/13646	video/mp4v-es	0:15:41	PRIORITY	txu-fal-antone-04-pt2of3 mp4
11	Clifford Antone Lectures	Clifford Antone Lecture Series, part 4 of 12	Antone, Clifford	2152/13646	https://repositories.lib.utexas.edu/handle/2152/13646	video/mp4v-es	0:23:43	PRIORITY	txu-fal-antone-04-pt3of3 mp4
12	Clifford Antone Lectures	Clifford Antone Lecture Series, part 5 of 12	Antone, Clifford	2152/13693	https://repositories.lib.utexas.edu/handle/2152/13693	video/mp4v-es	0:27:51	PRIORITY	txu-fal-antone-05-pt1of2 mp4
13	Clifford Antone Lectures	Clifford Antone Lecture Series, part 5 of 12	Antone, Clifford	2152/13693	https://repositories.lib.utexas.edu/handle/2152/13693	video/mp4v-es	0:28:12	PRIORITY	txu-fal-antone-05-pt2of2 mp4
14	Clifford Antone Lectures	Clifford Antone Lecture Series, part 6 of 12	Antone, Clifford	2152/13695	https://repositories.lib.utexas.edu/handle/2152/13695	video/mp4v-es	0:20:44	PRIORITY	txu-fal-antone-06-pt1of3 mp4
15	Clifford Antone Lectures	Clifford Antone Lecture Series, part 6 of 12	Antone, Clifford	2152/13695	https://repositories.lib.utexas.edu/handle/2152/13695	video/mp4v-es	0:23:39	PRIORITY	txu-fal-antone-06-pt2of3 mp4
16	Clifford Antone Lectures	Clifford Antone Lecture Series, part 6 of 12	Antone, Clifford	2152/13695	https://repositories.lib.utexas.edu/handle/2152/13695	video/mp4v-es	0:18:34	PRIORITY	txu-fal-antone-06-pt3of3 mp4
17	Clifford Antone Lectures	Clifford Antone Lecture Series, part 7 of 12	Antone, Clifford	2152/13698	https://repositories.lib.utexas.edu/handle/2152/13698	video/mp4v-es	0:20:41	PRIORITY	txu-fal-antone-07-pt1of3 mp4
18	Clifford Antone Lectures	Clifford Antone Lecture Series, part 7 of 12	Antone, Clifford	2152/13698	https://repositories.lib.utexas.edu/handle/2152/13698	video/mp4v-es	0:17:56	PRIORITY	txu-fal-antone-07-pt2of3 mp4
19	Clifford Antone Lectures	Clifford Antone Lecture Series, part 7 of 12	Antone, Clifford	2152/13698	https://repositories.lib.utexas.edu/handle/2152/13698	video/mp4v-es	0:24:46	PRIORITY	txu-fal-antone-07-pt3of3 mp4
20	Clifford Antone Lectures	Clifford Antone Lecture Series, part 8 of 12	Antone, Clifford	2152/13699	https://repositories.lib.utexas.edu/handle/2152/13699	video/mp4v-es	0:19:07	PRIORITY	txu-fal-antone-08-pt1of3 mp4
21	Clifford Antone Lectures	Clifford Antone Lecture Series, part 8 of 12	Antone, Clifford	2152/13699	https://repositories.lib.utexas.edu/handle/2152/13699	video/mp4v-es	0:23:47	PRIORITY	txu-fal-antone-08-pt2of3 mp4
22	Clifford Antone Lectures	Clifford Antone Lecture Series, part 8 of 12	Antone, Clifford	2152/13699	https://repositories.lib.utexas.edu/handle/2152/13699	video/mp4v-es	0:21:03	PRIORITY	txu-fal-antone-08-pt3of3 mp4
23	Clifford Antone Lectures	Clifford Antone Lecture Series, part 9 of 12	Antone, Clifford	2152/13702	https://repositories.lib.utexas.edu/handle/2152/13702	video/mp4v-es	0:20:25	PRIORITY	txu-fal-antone-09-pt1of3 mp4
24	Clifford Antone Lectures	Clifford Antone Lecture Series, part 9 of 12	Antone, Clifford	2152/13702	https://repositories.lib.utexas.edu/handle/2152/13702	video/mp4v-es	0:20:47	PRIORITY	txu-fal-antone-09-pt2of3 mp4
25	Clifford Antone Lectures	Clifford Antone Lecture Series, part 9 of 12	Antone, Clifford	2152/13702	https://repositories.lib.utexas.edu/handle/2152/13702	video/mp4v-es	0:22:17	PRIORITY	txu-fal-antone-09-pt3of3 mp4
26	Clifford Antone Lectures	Clifford Antone Lecture Series, part 10 of 12	Antone, Clifford	2152/13705	https://repositories.lib.utexas.edu/handle/2152/13705	video/mp4v-es	0:07:34	PRIORITY	txu-fal-antone-10-pt1of1 mp4
27	Clifford Antone Lectures	Clifford Antone Lecture Series, part 11 of 12	Antone, Clifford	2152/13708	https://repositories.lib.utexas.edu/handle/2152/13708	video/mp4v-es	0:17:15	PRIORITY	txu-fal-antone-11-pt1of3 mp4
28	Clifford Antone Lectures	Clifford Antone Lecture Series, part 11 of 12	Antone, Clifford	2152/13708	https://repositories.lib.utexas.edu/handle/2152/13708	video/mp4v-es	0:22:49	PRIORITY	txu-fal-antone-11-pt2of3 mp4

UT Austin


- For non-library managed content we need to work with collection administrators regarding their A/V content



The University of Texas at Austin
Texas ScholarWorks
University of Texas Libraries

Repository Home / UT Electronic Theses and Dissertations / UT Electronic Theses and Dissertations / View Item

Implementation of automated multilevel substructuring for frequency response analysis of structures






PDF

View/Open
Restricted to EID users (2.022Mb)

Date
2001-12

Author
Kaplan, Matthew Frederick

Share
 Facebook
 Twitter
 LinkedIn

Metadata
Show full item record

Abstract
In the design of vehicles, such as automobiles, aircraft, spacecraft, or submarines important to be able to accurately predict dynamic behavior of the structure. With extremely high cost of building physical prototypes of these vehicles, there is a great emphasis on analysis of computer models. In this dissertation, a method known as Automated Multilevel Substructuring (AMLS) is presented for accurately solving frequency response problems involving large, complex models with millions of degrees of freedom. Conventional methods for addressing these problems, such as component mode superposition using a Lanczos eigensolver or model reduction using component mode synthesis, are reviewed. The Automated Multilevel Substructuring (AMLS) method partitions finite element models into substructures, similar to component mode synthesis methods, but uses an automated partitioning procedure that reduces the burden on the analyst. The finite element matrices are projected onto a reduced subspace, on which frequency response is computed. Two frequency response algorithms are presented. Both methods require the solution of a global eigenvalue problem on the reduced subspace. The first method uses straightforward mode superposition. The second method employs a new iterative approach in which the modal frequency response is reduced to a residual problem that is solved using an iterative splitting method. The eigensolution and frequency response algorithms are specifically designed to take advantage of the properties of the reduced subspace. Numerical examples are presented for models with millions of degrees of freedom. The performance and accuracy of the AMLS method are compared to the standard commercial software package for large scale linear dynamic analysis. These examples establish that AMLS can be used to accurately obtain the response of very large models with significantly less computational cost.

UT Austin

- Working with OGS on new guidelines for supplemental materials and PDFs



The University of Texas at Austin
Graduate School

UT Austin

Moving forward

- Make referrals to our captioning unit
 - <https://legacy.lib.utexas.edu/services/captioning-and-transcription>
- TSW staff cannot assist with transcribing or captioning

UT Austin

Lots of remaining questions

- How much is good enough?
 - Specifically with PDF - the W3C guidelines have tons of steps for making a PDF fully accessible. What is good enough?
- What about DSpace itself?
- PDFs?
 - We have over 100K, so how do we check those for accessibility?

Up next, Christopher Deems



University of Texas at Austin School of Information



THE UNIVERSITY OF TEXAS AT AUSTIN

SCHOOL OF
information

Types of Captioning/Transcription Tools

Automated Captioning Software

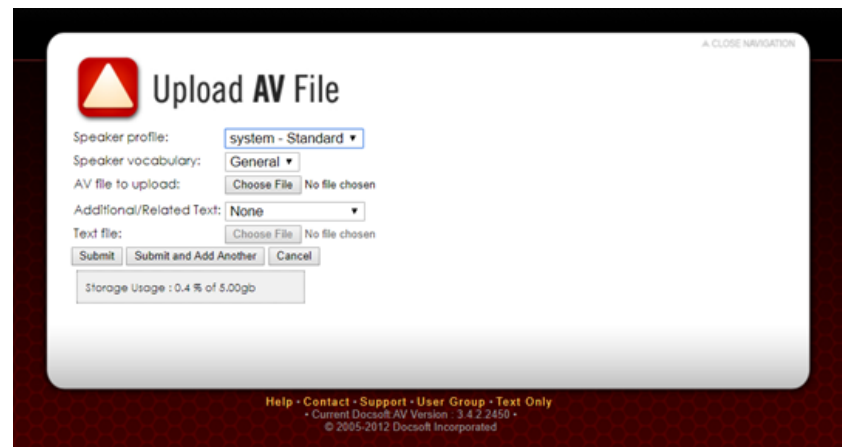
- Faster in generating full captions and transcripts
- Inaccuracies in newly developed captions/transcripts
- Requires less manpower to operate
- Potential slowdowns if software utilizes internet
- Licensing fees

User-Generated Captioning Software

- Slower in long-term
- On average, more accurate than automated
- May require additional editors/creators
- Less likely to encounter slowdowns
- Licensing fees

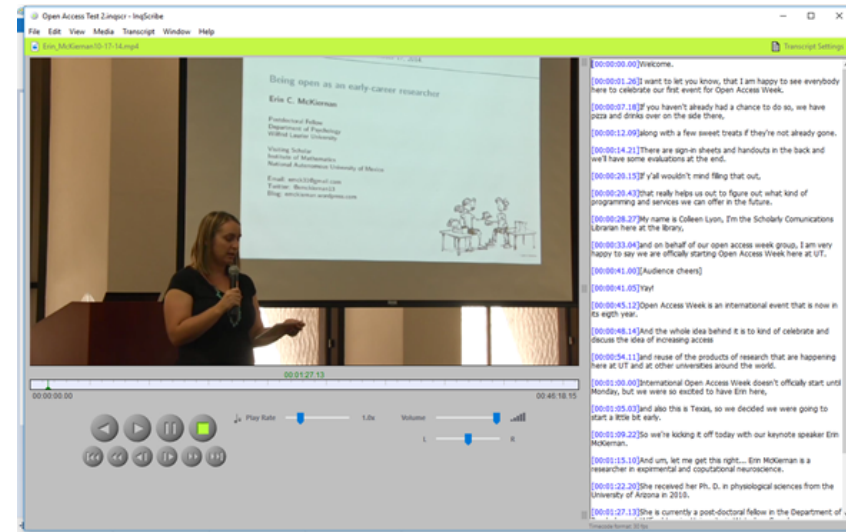
Example of Automatic Software: Docsoft

- Automated software with an online interface
- Ability to set different detectable vocabularies
- Downloadable transcripts can be easily edited
 - Software still produces errors in generated text
- Can slow down depending on internet



Example of User-Generated Software: Inqscribe

- DIY software with media player
- Automatically creates captions from transcripts
- Unique keyboard shortcuts to operate software
 - Foot pedal compatible!
- Limited potential; software only fully works on Macs



New Tools: Watson Captioning from IBM

- New cloud-based software service developed by IBM using Watson
- Speech-to-Text API
- Chat space for student collaboration
- Self-Learning, but still requires someone to steer the ship

Up next, Laura Waugh



Texas State University



The rising STAR of Texas

Accessibility Standards

- Texas State's standard for website accessibility is the **WCAG 2.0 Level AA standards**, which **requires captioning** for live and prerecorded audio and visual content
- Web Accessibility Initiative
 - <https://www.w3.org/WAI/intro/wcag>
- Amigos Library Services
 - <https://www.amigos.org>



Initial Steps

- Established a Captioning Workflow Team
 - Infrastructure
 - Costs
 - Tracking caption orders/invoices
 - Multiple language captioning
 - Updating catalog records
 - Statistics for reporting/updates

Initial Steps

- Established a Captioning Workflow Team
 - Infrastructure
 - **Costs**
 - **Workflows**
 - *Tracking caption orders/invoices*
 - *Multiple language captioning*
 - *Updating catalog records*
 - *Statistics for reporting/updates*

TXST

Infrastructure: Mediaflo

- Online media management system
- Locally hosted platform
- Linked from DSpace repository





Costs: Mediaflo

- Existing Mediaflo Video: 257 hours

	1 Minute Caption	Cost	Total
Amara Do-It-Yourself <i>Student Worker</i>	10 minutes time (per 1 minute captioning)	\$7.25 (hourly wage)	\$18,632
Rev Professional Captioning Service	1 minute	\$1.00	\$15,420

Costs: Mediaflo

- **Annual Mediaflo Video Added: 85 hours**

	1 Minute Caption	Cost	Total
Amara Do-It-Yourself <i>Student Worker</i>	10 minutes time <i>(per 1 minute captioning)</i>	\$7.25 <i>(hourly wage)</i>	\$6,162
Rev Professional Captioning Service	1 minute	\$1.00	\$5,100

TXST

A necessary and worthwhile expense!



Workflows

- Requests: Copyright Librarian
 - Review the audio/video to be captioned
 - Create a Fair Use Checklist
 - Document Fair Use Analysis for each audio/video
- All A/V: Acquisitions Department
 - Seek out captions from start (vendor, extracting, etc.)
 - Upload caption file to Mediaflo (srt or vtt)
 - Rev service, if not available otherwise

TXST

IR Accessibility Considerations

- Metadata
- File naming
- Web design
- Policies
- Time and Workflows



TXST

JAWS Screen Reader Software

- Free trial available: <https://www.freedomscientific.com/Downloads/JAWS>
- Browse your repository...

You may be surprised!





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☐ This Collection

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Communities & Collections

ACCOUNT

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STATISTICS

Most Popular Items

Statistics by Country

The Search for Late Pleistocene pre-Clovis Arc Texas: Problems and Potentials

Date
2007

Author
 Bousman, C. Britt
 Skinner, S. Alan

Metadata
[Show full metadata](#)

Geoarcheological research in the North Sulphur River valley of an alluvial sequence that spans 17,000 years and provides for the Lower Sulphur River Formation. Stone artifacts discovered on the eroded surface of the Lower Sulphur represent a pre-Clovis occupation. Before such a claim must be documented in these Late Pleistocene sediments exist anywhere in Texas, systematic geoarcheological identify Late Pleistocene deposits older than 11,050 B.P. searches must focus on these sediments.

Uri
<https://digital.library.txstate.edu/handle/10877/5612>

Collections
[Faculty Publications-Anthropology](#)



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☐ This Collection

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All of Digital Collections

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STATISTICS

Most Popular Items

Statistics by Country

The Search for Late Pleistocene pre-Clovis Arc Texas: Problems and Potentials

Date
2007

Geoarcheological research in the North Sulphur River valley has revealed the presence of an alluvial sequence that spans 17,000 years and provides evidence for the Lower Sulphur River Formation. Stone artifacts have been found on the eroded surface of the Lower Sulphur River Formation, indicating pre-Clovis occupation. Before such a claim can be documented in these Late Pleistocene sediments, more work is needed. Here in Texas, systematic geoarcheological research of the Pleistocene deposits older than 11,050 B.P. has not yet been the primary focus on these sediments.

Author



Bousman, C. Britt



Skinner, S. Alan

<https://digital.library.txstate.edu/handle/10877/5612>

Collections

Faculty Publications-Anthropology



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STATISTICS

Most Popular Items

Statistics by Country

The Search for Late Pleistocene pre-Clovis Archaeology in Texas: Problems and Potentials

Date

2007



For
ousman, C. Britt
kinner, S. Alan

Geoarcheological research in the North Sulphur River valley has revealed the presence of an alluvial sequence that spans 17,000 years and provides evidence for a pre-Clovis occupation. Stone artifacts have been found on the eroded surface of the Lower Sulphur River Formation. Before such a claim can be substantiated, more documented in these Late Pleistocene sediments. In Texas, systematic geoarcheological research of the Pleistocene deposits older than 11,050 B.P. must focus on these sediments.

<https://digital.library.txstate.edu/handle/10877/5612>

Collections

Faculty Publications-Anthropology

Policies/Considerations

- Deposited Content (e.g., PDF, A/V)
 - Who is responsible for ensuring accessibility?
- File Naming
 - Standardized naming or author-supplied file name?
- Web Design
 - Challenging on a larger-scale for developers

Up next, Nerissa Lindsey



Texas A&M International University



TAMIU

Background

- Web services team announced that all videos being uploaded to the university website needed to be captioned
- This prompted OIT to start captioning videos for two speaker series that go into the repository
- We got a site visit and presentation from the IT Accessibility Director from A&M Commerce, Lydia Harkey

TAMU

New Video

- OIT pays for captioning (using rev.com, cost: \$1/min.)
- Rev sends back a .SRT file and .TXT file
- Student Employee in OIT uses a program (Submerge) to merge the .SRT file with the MP4
- I'm given the final captioned MP4 and a file with the transcript- I upload both files into the repository

TAMIU

Archival Video

- The library director approved funding captioning for archival videos for the IBC speaker series
- The goal is to have all repository video captioned
- Most services are about \$1/min

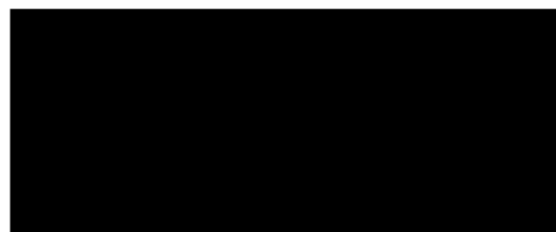
Media Player Accessibility



Image: <https://www.w3.org/WAI/gettingstarted/tips/designing>



Borderwall as Architecture: A Manifesto for the U.S.-Mexico Boundary



URI
<http://hdl.handle.net/2152.4/125>

Subject
Border wall
Architecture
U.S.-Mexico Border
Border security
Immigration enforcement
Video recordings for the hearing impaired

Collections
International Bank of Commerce Keynote Speaker Series

View/Open

- [Filmed Presentation \(882.9Mb\)](#)
- [Speaker profile \(387.9Kb\)](#)
- [Film transcript \(41.84Kb\)](#)

Date
2017-11-28

Search

- ☒ Search DSpace
- ☐ This Collection

BROWSE

All of DSpace

Communities &

By Issue Date

Authors

Titles

Subjects

Disciplines

TAMIU

Image Accessibility

- Alternative-text is the minimum level for image accessibility
- A screen reader will usually say: “image of (alt-text)” or (“alt-text”)
- Can’t easily edit those alt-text fields to be more descriptive in DSpace

<https://webaim.org/techniques/alttext/>, <https://webaim.org/techniques/images/>

<https://www.w3.org/WAI/tutorials/images/decision-tree/>

Summary

WAVE has detected the following:

- 6 Errors
- 4 Alerts
- 7 Features
- 15 Structural Elements
- 39 HTML5 and ARIA
- 0 Contrast Errors

Panel Options

- DETAILS: A listing of all the WAVE icons in your page.
- DOCUMENTATION: Explanation of the WAVE icons and how you can make your page more accessible.
- OUTLINE: The heading structure of the web page.

h1



TEXAS A&M INTERNATIONAL UNIVERSITY SUE AND RADCLIFFE KILLAM LIBRARY

Login

ARIA ***aria-hidden="true"** TAMUI DSpace Home / Special Collections and Archives / Newspaper Archives / View Item

h2 El Mañana



alt

Thumbnail

h5 URI

<http://hdl.handle.net/2152.4/118>

h5 Subject

Newspapers
Periodicals
Periódicos

h5 Collections

Newspaper Archives



ARIA ***aria-hidden="true"**

Search DSpace

This Collection

h2 BROWSE

All of DSpace

Communities & Collections

By Issue Date

Authors

TAMIU

Challenges - AV



- **Time:**
 - The captioning will add time onto an already lengthy process
- **Cost:**
 - Limited library funding for professional captioning
 - Will OIT continue paying for captioning for future videos?

TAMU

Challenges - Other Content Formats

- We haven't begun to address accessibility of other formats in our repository
 - Can a PDF accessibility checker could be built into Vireo for ETD's?
 - Some sort of automated checking process for PDF's already in the repository?

TAMIU

Challenges - Repository Platform

- Can future updates be made to DSpace to make improvements for accessibility
- Many library vendors have a VPAT (Voluntary Product Accessibility Template) <https://vpats.wordpress.com/> or a statement of accessibility

A word cloud featuring the word "THANK YOU" in large, bold, black capital letters. Surrounding it are numerous other words in various sizes and orientations, representing different languages and expressions of gratitude. The words include:

- GRACIAS
- ARIGATO
- SHUKURIA
- GOZAIMASHITA
- EFCHARISTO
- KOMAPSUMNIDA
- JUSPAXAR
- DANKSCHEEN
- TASHAKKUR ATU
- YAQHANYELAY
- SUKSAMA
- EKHMET
- MEHRBANI
- MAAKE
- GRAZIE
- PALDIES
- BOLZIN
- MERCICI
- TINGKI
- BIYAN
- SHUKRIA
- SPASIBO
- SNACHALNYA
- CHISLTU
- MADEKJA
- MATYKA
- YUSPAGGATAM
- SHARYASAD
- ATTO
- SHARIK
- MAKETEJ
- MAKETEJ
- MINMONCHAR
- LAH
- AGUYJE
- FAKALJE
- SAVCO
- HERASTAWRY
- GALJTHO
- UNALCHESH
- SPASIBO
- DENKAUJA
- HEMACHALNYA
- ENDUJU
- SINOMO
- MAKETEJ

Discussion

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Nerissa Lindsey: nslyndsey@tamiu.edu