The National Association of
ADA Coordinators
Higher Education Track

Effective Use of Assistive Technology
Part I

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George Mason University

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Caveat

These materials are provided for **informational purposes only** and **are not** to be construed as **legal advice**. You should **seek independent or house counsel** to resolve the individualized legal issues that you are responsible for addressing. Further, any policy or procedure additions or revisions **should be reviewed by your college's legal counsel prior to implementation**.

Effective Use of Accessible Technology – Part 1

Defining Assistive Technology

- Many people automatically think individuals with disabilities.

- **Assistive technology** is any kind of **technology** that can be used to enhance the functional independence ….

www.fctd.info/factsheet/at101

Understanding AT

- I like to think a simple definition of AT is: anything designed differently to make it easier to use by anyone.

- Understanding of AT is very similar to the definition of Universal Design: Universal design is a design concept that recognizes, respects, values and attempts to accommodate the broadest possible spectrum of human ability in the design of all products, environments and information systems.

AT or UD, which is it?

- It's both!

- Finding ways to include assistive technology in the classroom while finding ways to integrate universal design within courses and University infrastructure.

- Why look at both?

Tools of the Trade: Assistive Technology and Creating Accessible Instructional Materials

Types of Impairment and Assistive Technology

- **Sensory (Loss of vision, hearing, or both)**
  - Screen readers and refreshable braille devices for people who are bling or have other print disabilities
  - Open or closed captioning for people who are deaf
- **Learning/Cognitive**
  - Tools for organizations
- **Physical**
  - Alternatives input tools, such as speech-to-text software, for people who cannot use a computer mouse
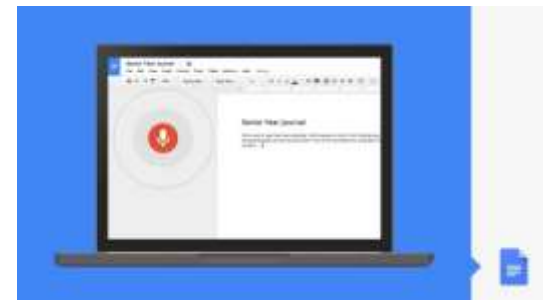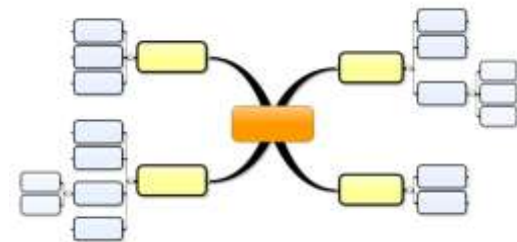
Read and Write Demo

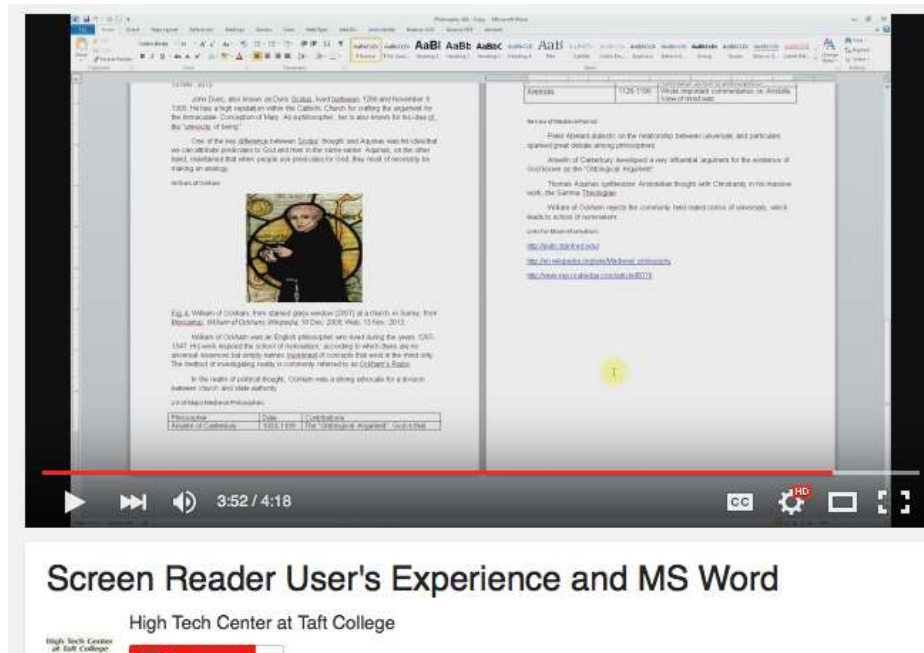- E.g. Imagine the possibilities if all students had access to technology like this, not just those with disabilities …..
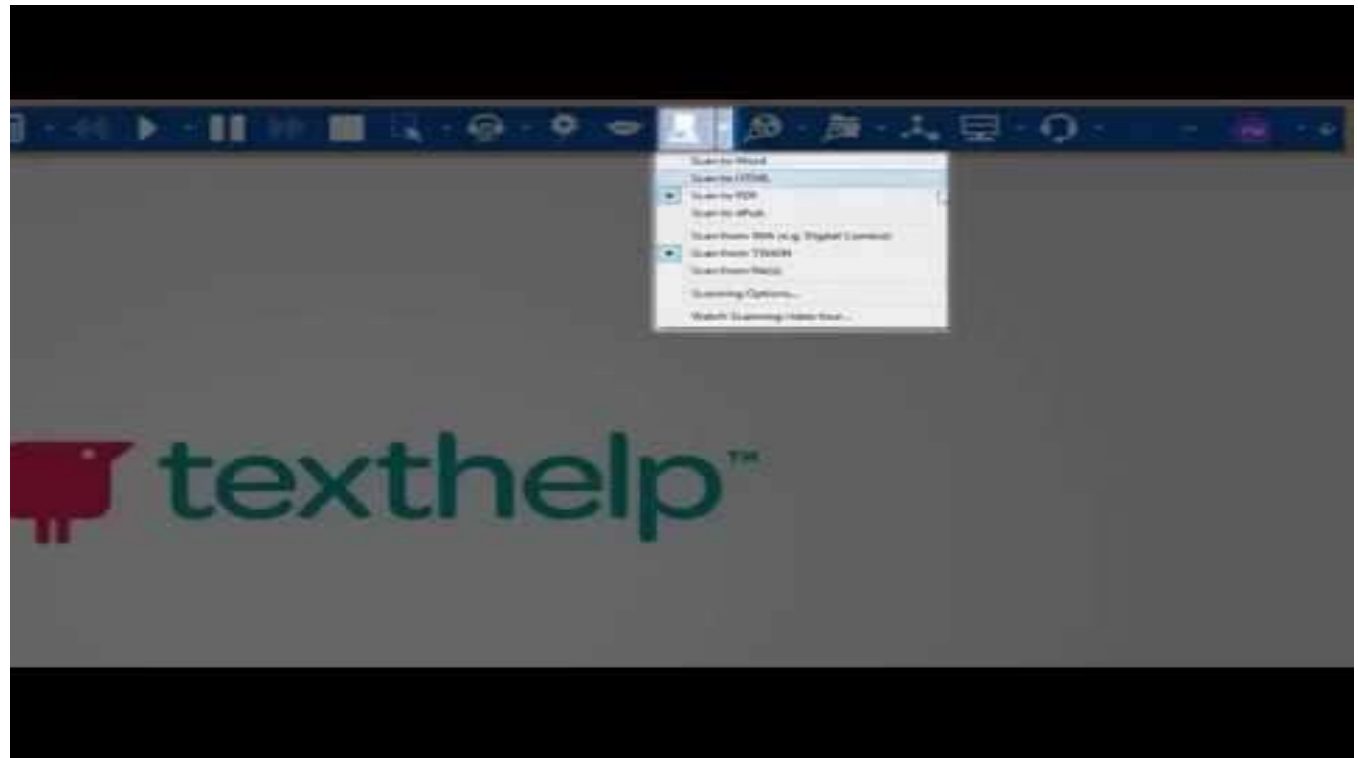
Would you consider a robot AT?

Jaws Screen Reader Demo

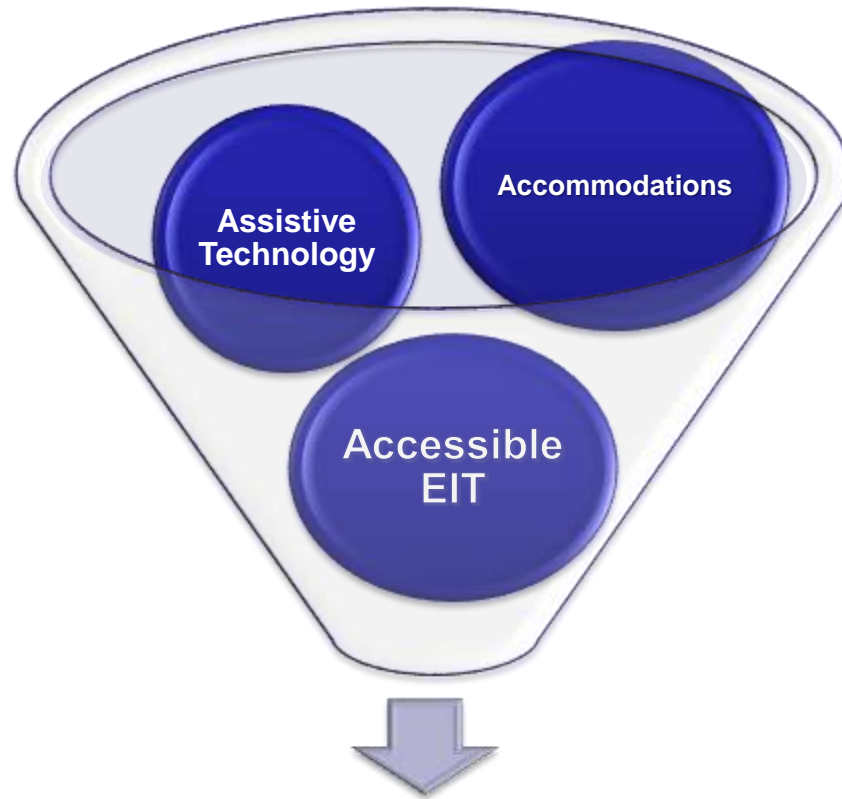- E.g., Navigating a Word Document (a screen reader user's perspective)

Screen Reader User's Experience and MS Word

High Tech Center at Taft College

What exactly does Electronic and Information Technology (EIT) Accessibility 'look' like?

- Creating Accessible Instructional Materials (Demos and Examples)
  - Documents Accessibility (Word, PPT, PDF)
  - Web Accessibility
  - Supplemental applications (Web-based)
  - Video Accessibility

How Does Everything Tie Together?

Equal Access for Everyone!

Anatomy of an Accessible Document

Document courtesy of *Portland Community College*: http://www.pcc.edu/resources/instructional-support/access/documents/OnlineAccessibilityHandbook-loRes.pdf

Before and After Demo - Websites

- E.g., Improving a website using Web Content Accessibility Guidelines (WCAG) 2.0, http://www.w3.org/WAI/demos/bad/

Understanding Web Accessibility

- E.g., **Labeling Images/Graphics**
  - Graphics should have meaningful labels:
    - **E.g.,** "*Photo of Secretary of Education Arne Duncan reading to children at Central Elementary School.*"
    - **Not**: "*Photo.jpg*"
- The labels can be visible to everyone, or they can be hidden in the programing of the web page. Designer's choice!

Understanding Web Accessibility

- E.g., **Using descriptive links, not URLs**
  - Provide users with the proper context of where clicking the link will take them.
    - E.g., Use George Mason University Home Page as opposed to http://www.gmu.edu

Understanding Web Accessibility

- E.g., **Color Contrast**
  - Meaningful information should be conveyed through more than just color.
    - E.g., Individuals unable to identify color would not know which fields were required. A simple fix is to add an asterisk(*) next to the required fields.

Tell us who you are. (required fields in **red**)

Company:

Salutation: (please select) ⌄

First name:

Last name:

Job title: (please select) ⌄

Phone: e.g., 415-555-1111

Web address: http://

E-mail:

Understanding Web Accessibility

- E.g., **Keyboard Navigation**
  - Users should be able to "tab" through the page and get to all information and functions.
  - Pages should not require users to manipulate a mouse for navigation.

Web-based Tools – Library Databases
(Full text HTML, ReadSpeaker)

‹ Result List   Refine Search   ‹ 21 of 647 ›

| Inglés/Português | ▾ | Translate |

Ability to translate text

Title: Providing Access to Engagement in Learning: The Potential of Universal Design for Learning in Museum Design. By: RAPPOLT-SC
Issue 3

Database: Education Research Complete

Providing Access to Engagement in Learning: The Potential of Universal De

Downloadable mp3 file

🔊 Listen ❚❚ ■ American Accent ▾ ⚙ ⬇ «

Also available as separate PDF

Following ... ssage of the Americans with Disabilities Act of 1990 (ADA), many museums improved the accessibility of their fa
in museum ... iences. Universal Design for Learning (UDL) provides an alternate model for the design of museum program
not only ph ... ss but also access to engagement in learning. In this article we argue that UDL ha ... he potential to
examples, w ... the UDL design guidelines can be used to improve the probability that engager ... will occur as i

Built-in text-to-speech capability

DESIGNED ENVIRONMENTS AND THE CONCEPT OF DISABILITY

WHAT IS UNIVERSAL DESIGN FOR LEARNING?

Th ... ritically important to the ... of people wi
an ... ties Act of 1990 (ADA) ... seums mo
reach of their programming and exhibit spaces to people with disabilities. The addition of wheelc
exhibit offerings like the handheld audio guide system developed and implemented by the Nev
provided. While the addition of such accommodations has had a substantial and positive impact

Text Highlighting

Accessibility solutions provide for the improved physical presence of people with disabilities in museum spaces (for example
low vision) But accessibility does not on its own allow for the engagement of people with disabilities in the museum expe
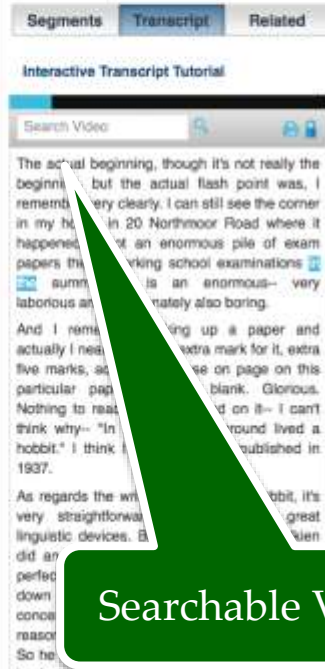
Web-based Tools – Films on Demand *(Captions and Transcripts)*

Interactive Transcript

Captions

Searchable Video Content

Video Accessibility

- Captioning

- Audio Description – Chemistry video

- Accessibility of Video Player

Creating Accessible Videos

- **What's involved in making videos accessible?**
  - Providing **captions for videos**, **transcripts for audio files**, **descriptive video (or audio description)** for individuals with visual impairments
  - Be practical!

- **Setting up a process...**
  - Consider 3rd party vendors, in-house staffing, or a combination of the two.
  - E.g., For audio description, ***Outsource*** (3rd-party vendor) vs. ***In-house*** (*YouDescribe*)

- **What platform will you use?**
  - Video platform is important! E.g., ***Free*** (YouTube, Vimeo) vs. ***Paid*** (Panopto, Kaltura)
  - Are video player controls keyboard accessible? Free of keyboard traps? All features available? Interface with LMS?
  - Accessible Video Player example, http://www.accessibilityoz.com/ozplayer/

Creating Accessible Videos – Tips

- **What about automatic captioning tools?**
  - E.g. YouTube CAPTION FAIL – Jamaican Hoax Video, https://www.youtube.com/watch?v=23H8IdaS3tk
  - **Takeaway?** There is no cheap and easy fix!

YOU GOTTA BE CAN WE DO YOU THINK IF WE MAKE A SHOULD JUST BE ALONE?

Cost Comparisons by FY

	FY12*	FY13	FY14	FY15	FY 16 (so far)
Total Minutes	3,453	7,309	16,419	19,261	14,766
Total Hours	57.55	121.82	278.4	321	241
Total Jobs	195	371	1034	1296	876
Hours (Outsourced)	18.63	68.97	222.55	275.95	241
Jobs (Outsourced)	24	177	901	1136	876
Avg. Cost/Min (Outsourced)	**$2.94**	**$2.73**	**$2.35**	**$1.88**	**$1.39**
Hours (In-house)*	38.92	52.85	51.1	45.05	2.68
Jobs (In-house)*	171	194	133	160	70
Total Costs (In-house)*	$13,723.45	$0	$0	$0	$0
Avg. Cost/Min (In-house)*	**$5.87**	$0	$0	$0	$0
Cost Savings	**($6,858.55)***	**$10,163.36**	**$13,420.31**	**$9,050.83**	**$7,180.02**

*In FY12, all in-house work is attributed solely to grad students. That work is now shared amongst a number of Mason staff/faculty since FY13.

What the overall numbers show…

Completed Acc Media Requests

Fiscal Year	Value
FY12	147
FY13	337
FY14	1034
FY15	1296
FY16 (so far)	877
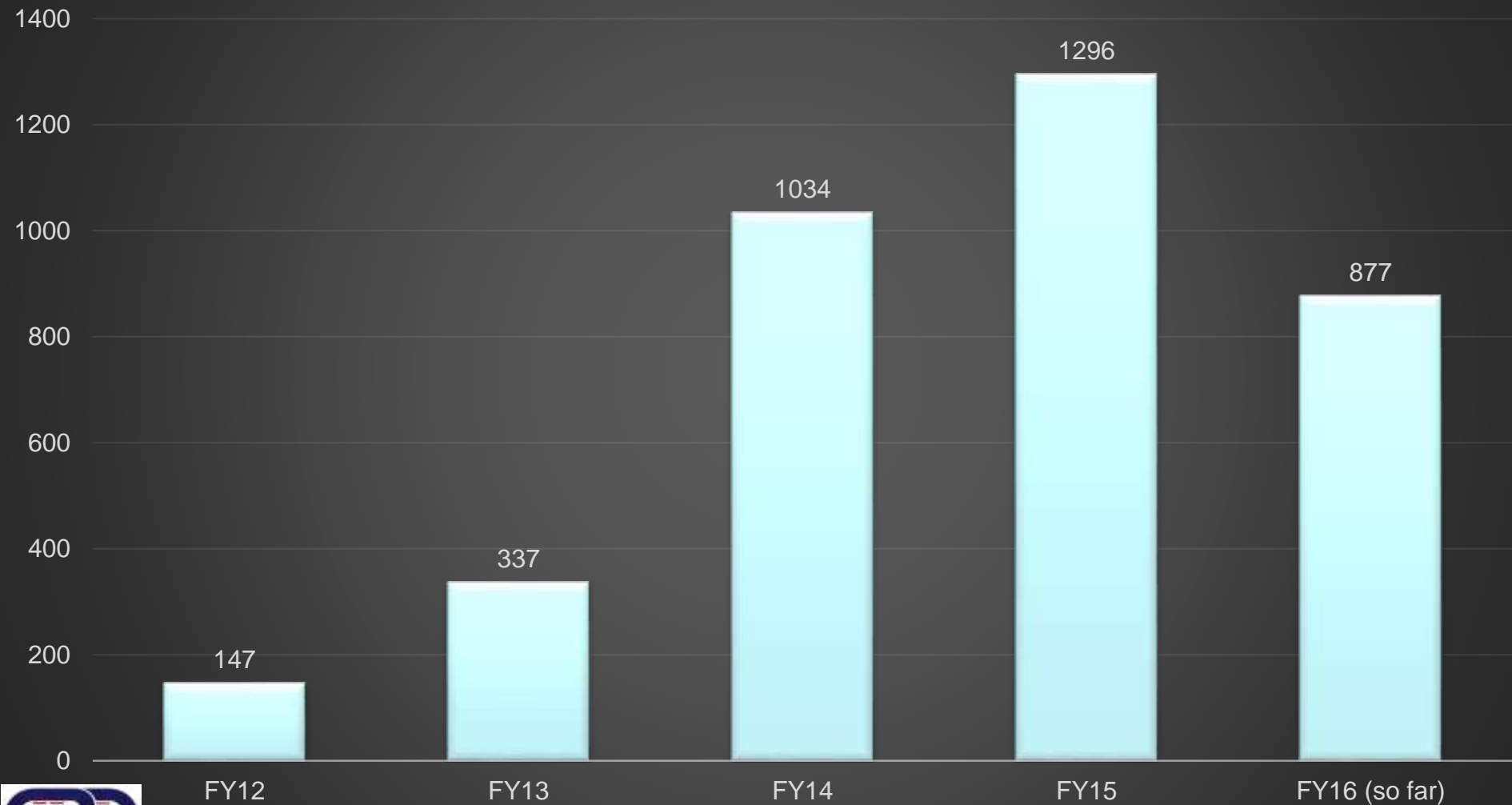
What the breakdown shows

Compliance Breakdown vs Accommodation
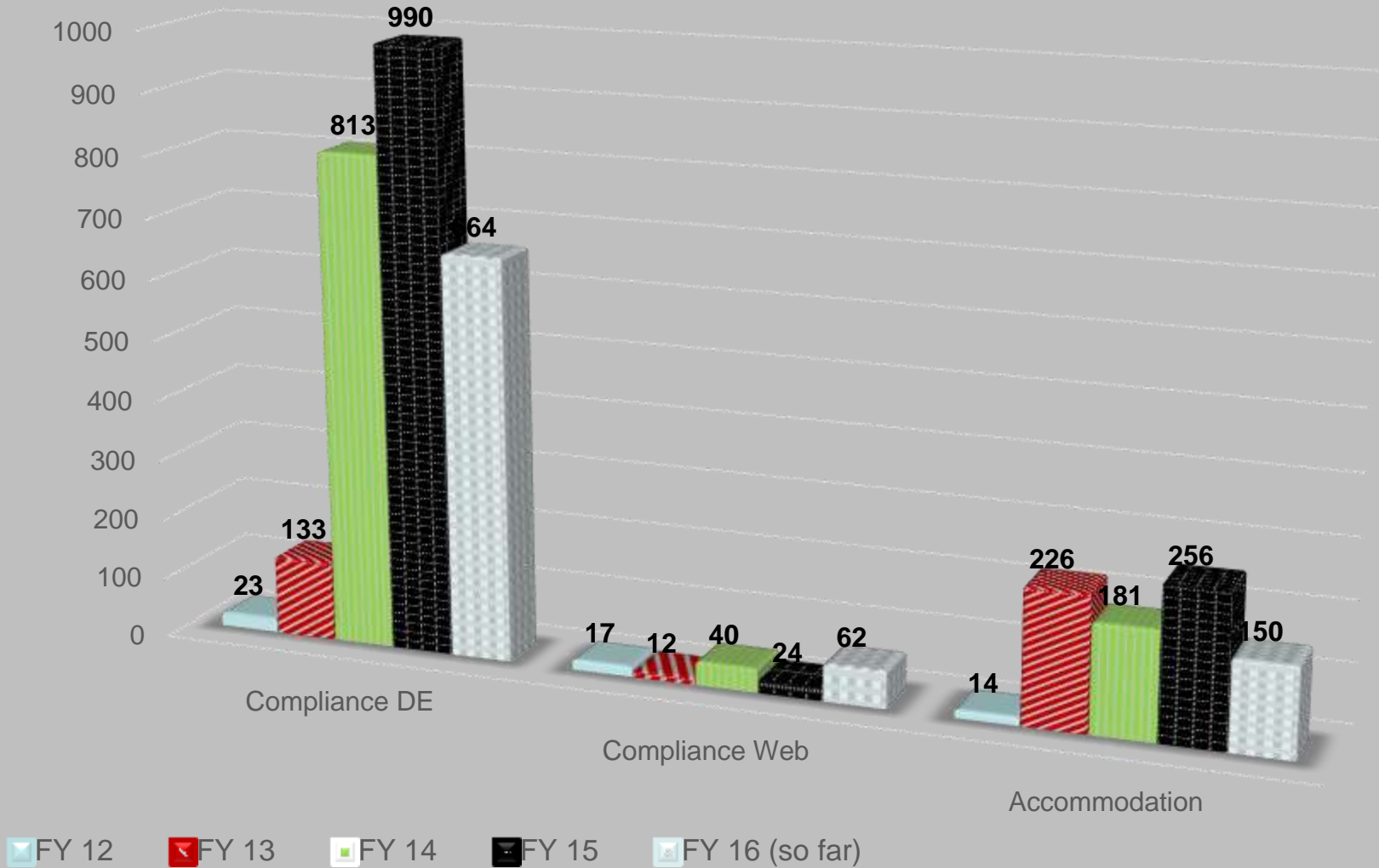
Improved Access to Library Resources

- How does this effect captioning?

Library purchases media databases as well as provide media to be loaned out. Captioning and audio description still come in as requests.

- Library established an ***Accessibility Coordinator/Instruction Designer*** position
  - Liaison between our office and library staff/resources

- This has led to:
  - Improved hand-off when captioning library resources
  - Improved coordination with Copyright Office
  - Informal process for review of library technology purchases – For example, helping library Procurement to ensure responsibility of captioning isn't solely on Mason if a media database is purchased.

What the breakdowns show part 2

Breakdown of Delivery of Media File

- EMAIL: 546
- KALTURA: 1326
- LIBRARY (DATABAES): 26
- YOUTUBE: 1640

■ Overall #s
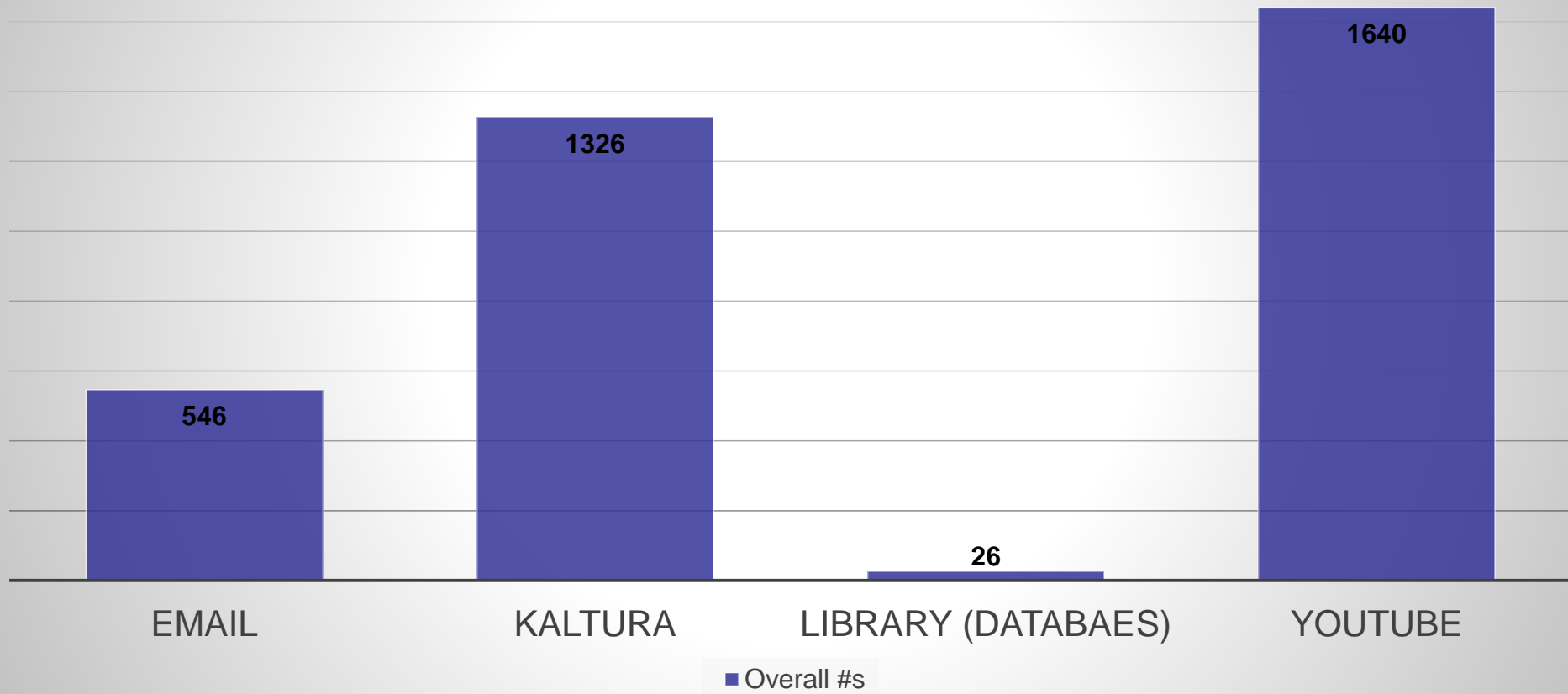
Document Accessibility

Scanning Documents

- **Things you CAN do to help make it accessible.**

- **Scanning:**
- **Whether you have an electronic file or a hardcopy:**
  - Use software that came with your scanner to import document– this will produce a TIFF file.
  - Save file

- **What NOT to do ….**

- Always use OCR Never assume that a copy is screen reader ready because it "looks" clean.

Converting Documents

- **OCR software** **– open your scanned document with:**
  - **ABBYY Pro**
  - Adobe Acrobat Pro
  - Read & Write Gold

- **Save to desired format(s) –** PDF, Word, RTF,Text etc.

- **Editing**
  - **Some editing may be needed to assure accessibility**
  - **Depending on final format needed -editing can be permormed through OCR software or Word.**

Microsoft Built-In Accessibility Checker

– When you go to file, you'll see on the left side a "Check for Issues" and when selecting that you'll find "Check Accessibility"
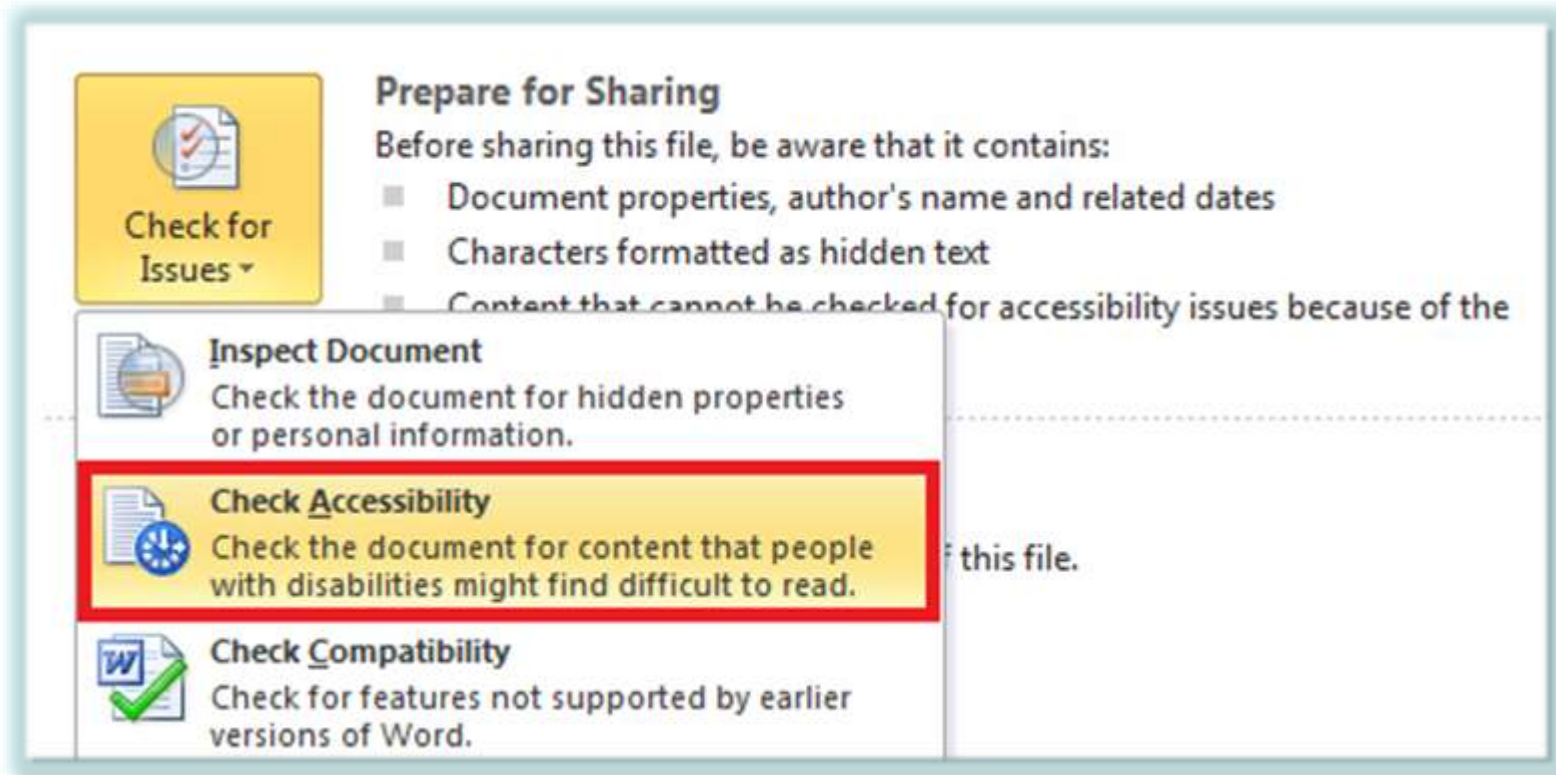
Adobe Reader Accessibility Features

- There are some helpful accessibility features in the free Adobe PDF reader. For example, any PDF file open in Adobe reader can be read aloud with the "Read Out Loud" option.

- Under the 'View' menu, select 'Read Out Loud', then 'Activate Read Outloud'.

- The Read Out Loud feature of Adobe Reader can be accessed with Keyboard Commands, as listed below.

-
    - Activate Read Out Loud: Shift + Ctrl + Y
    - Read This Page Only: Shift + Ctrl + V
    - Read To End of Document: Shift + Ctrl + B
    - Pause/Resume: Shift + Ctrl + C
    - Stop: Shift + Ctrl + E

Next Steps

- **Create Workflow**
  - **Find key stakeholders (DE, Library, Instructional Designers, etc.)**
  - **Start or continuing tracking data such as websites, media, databases, etc. find new areas for tracking**
  - **All options on table!**
- **Create campus buy-in**
  - **Educate**
  - **Train targeted areas to help build allies**
  - **Locate and advertise everything accessibility in one place**
- **Improve success**
  - **Survey students and staff**
  - **Start or keep testing for accessibility**

- **PART 2 IS COMING UP!**   Want to learn more about implementation of accessibility at a campus level? Join me at 3:30!

Questions and Answers

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IT Accessibility Coordinator

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Effective Us of Accessible Technology
Part II

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NATIONAL ASSOCIATION
OF ADA COORDINATORS

Professionals Making the
Americans with Disabilities Act Work

Let's look to see what we need to put the puzzle pieces together:

- Partnerships
- Training
- Marketing and Awareness

- Accessibility Plan
  - Policy and Procurement Language
  - Web Accessibility
  - Accessible Media
  - E-Learning
  - Student Services (AT and Universal Design)

It doesn't matter where you start your focus, it is a continuation cycle that constantly helps meet the needs of all students.
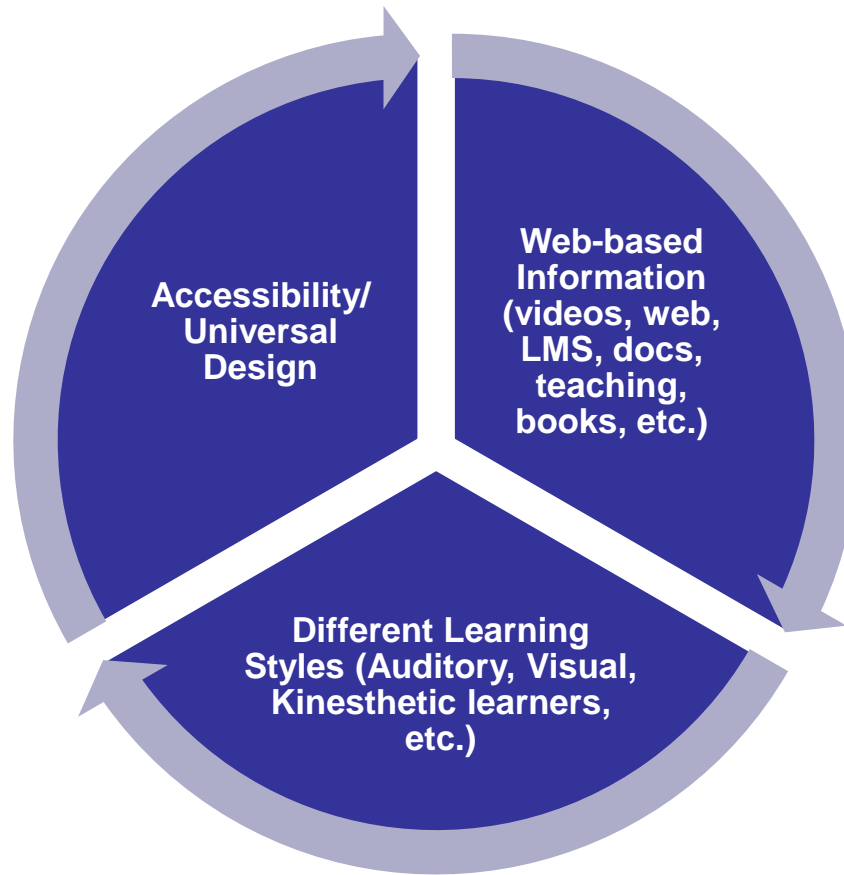
Building Accessibility Into the Process

Reactive
- Training
- Marketing
- Partnerships

Accessibility Plan
- Training
- Marketing
- Partnerships

Proactive
- Training
- Marketing
- Partnerships

Policy
- Procedure
- Remdiation
- Procurement
  - ASRB
  - Vendor relationships
- IT Accessibility Committee

Web Accessibility
- Automated
- Manual Process
- Checklist
- Initiative
- Databases
- Procurement
- Gaps

Accessible Media
- Captioning
- Process
- Media Players

E-Learning
- DE Audit
- Accessible Docs
- Supplemental Applications

Student Services n(Text)
- Process
- AT
- Universal Design
- RWG
- Self Scan
- Mobile Apps

Laying the Foundation: Building an Accessible Institution

What We Know...

Disability Rates in Higher Education

- **Increasing # of SWDs enrolling** in higher education (U.S. GAO, 2009).

- **Greater variation in types of disabilities** reported (Digest of Education Statistics, 2011).

- **SWDs have lower participation and completion rates** in higher education than their nondisabled peers (Mamiseishvili & Koch, 2011).

- Existing strategies for supporting SWDs in higher education rooted in **"medical model"** (Burgstahler, 2012).

Growing Role of Online Learning in Higher Education

- **Increasing role of online learning** in higher education (Allen & Seaman, 2013).

- Increasing **adoption** of **newer and more innovative EIT** (Kim, 2011).

- **Inaccessible EIT can adversely impact** the ability of a SWD to **access course content** (Bühler, Fisseler, & others, 2007; Fichten, Asuncion, Barile, Ferraro, & Wolforth, 2009).

- **Growing number of legal challenges** against higher education institutions for implementing inaccessible EIT

Roadmap to Electronic Information Technology Accessibility (EITA)

It may be a slippery ride ……..

Careful you don't want to find yourself going the

Best Practices in EITA

Recent legal actions against higher education institutions related to the inaccessibility of information technology (IT) can serve to inform higher education institutions as to best practices and strategies for providing accessible IT in accordance with federal legislation.

The following promising practices are among those suggested by resolution agreements and settlements:

- Conduct an audit of the **accessibility of IT**, and develop a corrective action strategy to address problems identified in the audit.
- Set institutional standards relating to **accessible technology** and create a method to monitor compliance.
- Provide training and education about accessibility to anyone on campus who is responsible for creating or procuring **IT**, as well as those responsible for creating content.
- Institute procedures for addressing accessibility as a requirement within the procurement process.
- Provide and publicize a mechanism by which students, faculty, staff, and members of the public can report access barriers.

No Stone goes Unturned

Definition of "Accessible"

OCR resolutions with the South Carolina Technical College System, University of Cincinnati and Youngstown State, all define "accessible" as follows:

- "Accessible" means a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. The person with a disability must be able to obtain the information as fully, equally and independently as a person without a disability.

List of Topic Areas Covered, but not limited to …..

- **Accessibility Audit and Corrective Action Strategy**
- **Policy**
- **Training and Education**
- **Procurement**
- **Websites**
- **Learning Management Systems**
- **Classroom Technologies (Podiums, Display Equipment, and "Clickers")**
- **Banks and ATMs**
- **Grievance Procedure**
- **Captioning**
- **(My personal favorite) Ownership of Accessibility**

Identify your Strategic Partnerships

Start with the obvious!

- How many students and faculty are registered with disabilities?
- What general support services do students and staff maximize overall? (Libraries, Writing or Tutoring Center, etc.)
- What offices are academic units are a MUST for students or staff to access? (Registrar, Admissions, HR, etc.)
- What groups design course, websites, other technology used throughout the school? (IT, Distance Education, Instructional Designers, Communications and Relations, Marketing, etc.)
- **Getting on the schedule of Key Authority Administration (The Decision Makers and Money Shakers)**

On our campus…

- *Getting Started*
  - Kellar Institute for Human disAbilities (KIHd)
- *Ongoing*
  - Disability Services (DS)
  - Information Technology Unit (ITU)
    - Online Learning Services
    - Instructional Design Team (ID)
  - University Libraries (UL)
  - Distance Education (DE)

Establishing a Framework

Budget/Prioritization

- Where is the money coming from?
- Whose managing the service?

How are you staffing the service?

- Disability Services
- ADA Coordinator
- HR

Infrastructure?

- Investing in Online Learning or Focus is F2F Learning? Consider using E-Learning to cover all aspects - Platforms (e.g., Blackboard, Desire2Learn, Canvas, etc.)
- Built-in tools (e.g., UDoIT by UCF)

Develop policies and procedures

- IT Accessibility, Procurement
- Procedures for various services (Accessible Text, Media, Web, Purchasing, Grievance, etc.)
- How will you handle outside policy and procedures such as Libraries, Bookstore, etc.?

Customizing a Framework

1. Setting an Institutional Goal – Getting Top Approach Buy In;

2. Set Specific Technical Standards – Section 508, WCAG 2.0, etc. areas that it covers;

3. Involve Accessibility in Procurement – New purchases and renewal contracts of existing purchases;

4. Continuing Coordination of EIT with Stakeholders – Ensuring communication and training across all levels;

5. Ensuring Compliance – Identify measurable, track, test, repeat!

6. Provide Notice - Improvement, Remediation, Grievance, etc.

Roles and Responsibilities within Mason's Policy

The Senior Vice President, Provost, Vice President of Information Technology and CIO, or designee, will ensure that personnel responsible for electronic and information technology procurement, programs and services will possess the necessary technical knowledge related to accessibility standards. Refer to the **Procedure** documents for additional guidance on roles and responsibilities.

- **Deans, Directors, and Managers** will provide oversight of training and education of all staff and ensure compliance with federal and state laws, regulations, and Mason policies governing accessible technology.
- **Teaching Faculty** will ensure accessibility of instructional materials to allow for equally effective access for all faculty and students, as documented in the campus guidelines and plans for accessible technology.
- **Purchasing and Procurement** will ensure compliance with the guidelines for electronic and information technology procurement, including the acquisition of all technology with a user interface.
- **Developers and Content Managers** will ensure accessibility of campus web sites, web applications, and web content, as documented in the campus guidelines and plans for accessible technology.

Roles and Responsibilities: How are you involved with accessibility?

Teaching Faculty and Staff

Do you use Blackboard or another Learning Management System (LMS)?

Do you use websites in class or for posting information?

Do you create or post documents or videos online for class?

Do you use technology (i.e., wikis, etc.) for your class assignments?

Do you use visuals or play audio/video in the classroom that give important info pertaining to the class?

Do you use webinars, or other classroom capture or conference technology or record your class for review?

Roles and Responsibilities: How are you involved with accessibility?

Administrative Staff

When overseeing or working on projects do you integrate accessibility into the planning process?

Do you train your staff on accessibility so it comes from a top-down approach?

Do you influence or decide on technology purchases, if so have you considered accessibility?

Do you oversee computer classroom settings, is it accessible?

Do you develop Policies, procedures or guidelines for you offices or employees? If so, have you included accessibility?

When creating committees, have you included someone from the ATI office to help with accessibility?

Roles and Responsibilities: How are you involved with accessibility?

IT Professionals

Do you influence or decide on technology purchases?

Do you develop websites, applications or documents?

Do you oversee computer classroom settings?

Do you manage others who may work on the above mentioned?

Do you work in multimedia or telecommunications?

Do you use or help faculty use webinars, other classroom capture or conference technology?

ADA
NATIONAL ASSOCIATION
OF ADA COORDINATORS
Professionals Making the
Americans with Disabilities Act Work

If you answered "Yes" to any of these questions, you may be …..

- **Posting,**
- **Distributing,**
- **Creating/Developing,**
- **Using,**
- **Maintaining …… Inaccessible Information.**

What can you do to make it accessible?

Roles and Responsibilities broken down on Website

GEORGE MASON UNIVERSITY | Assistive Technology Initiative

About Us ▼   Accessible Text   Accessible Media   **Web Accessibility** ▼   Training ▼   Policy ▼

Web Accessibility

Your Roles and Responsibilities ▼

   Research and Academic Faculty

   Web Developers/Content Managers

   Administrative Staff

   Purchasing and Procurement

   Students

Web Accessibility Testing

Your Roles and Responsibilities

Everyone in the Mason community has some responsibility when it comes to accessible web content. The role of the ATI is to help you understand what your part is and to work collaboratively with units throughout the University to provide resources and training. Our responsibility is to hold ourselves accountable to the standards in which we ask the Mason community to follow regarding web content and documents. Our goal is to provide a university-wide awareness of what web accessibility is and how it may affect yourself, a student or a co-worker.

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Un-Webbing the Web of Accessibility into an Enterprise Inclusion

- Breakdown of areas involving accessibility;
- Understanding needs
- Offering choices to meet needs
  - Corralling all faculty
  - Setting standards that stay relevant
  - Require approval; pick from authorized list?
- Working across functions

Setting Priorities

- New vs Old Purchases Procurement Policy in place helps draw a line for Legacy Systems.

- Institutions might wish to prioritize compliance initiatives targeting new websites and content with a commitment to improve access to existing and archived sites
  - This focuses on Websites, Documents, Videos, etc.
    - A number of resolution agreements target compliance in this manner

The Web of Accessibility

- E-Learning
- Websites
- Design
- Procurement
- Library
- Policy
- Databases
- Content
- Documents
- Training
- Videos
- Textbooks
- Supplemental Material
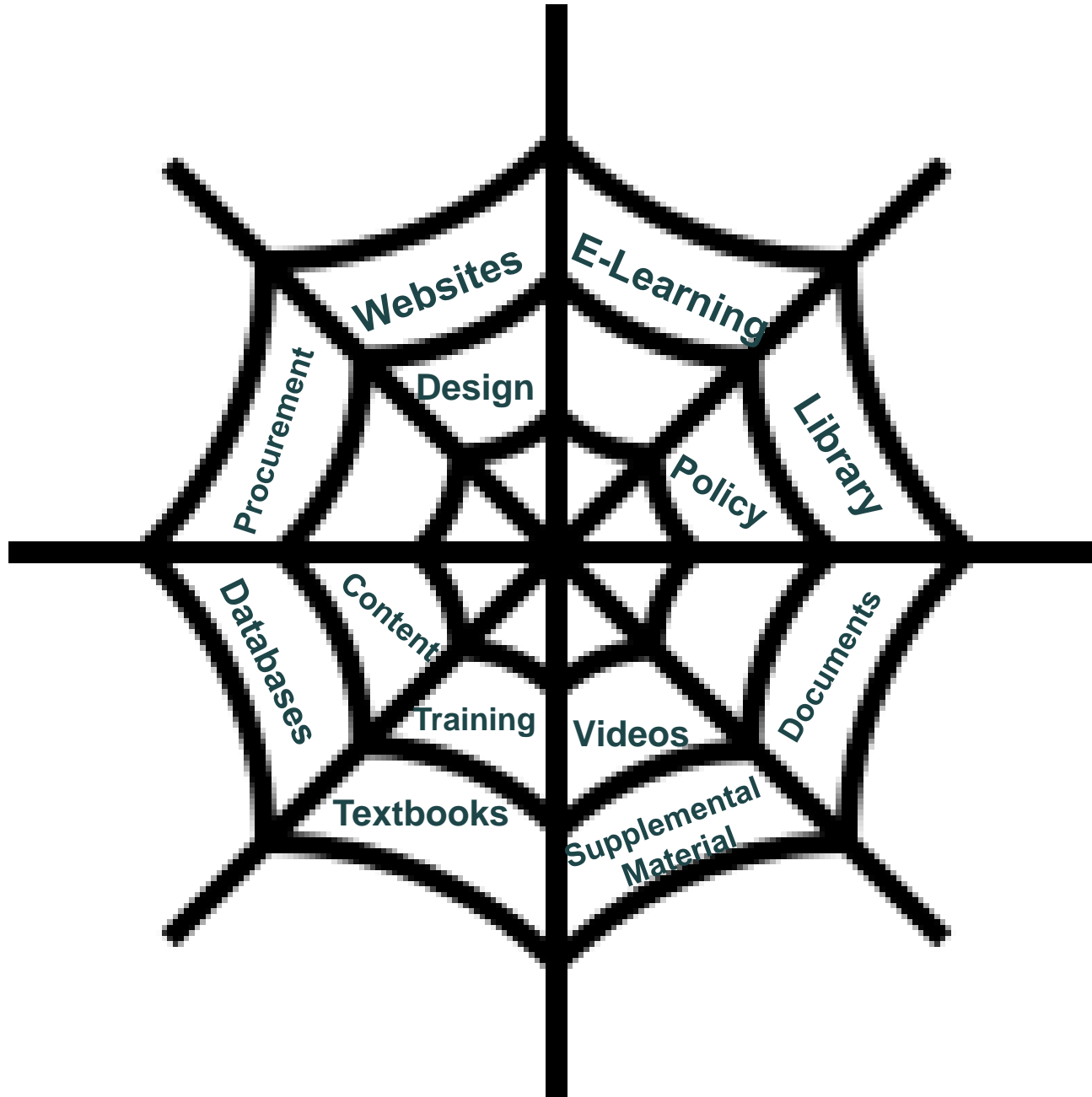
Accessibility Policy Included:

Mason is committed to maintaining a diverse and inclusive academic community, where all students are afforded the opportunity for a transformational learning experience. This commitment must and does include individuals with disabilities. Therefore, the ***procurement, development, maintenance, and/or implementation of electronic and information technology*** will conform to the accessibility standards specified in Section 508 of the Rehabilitation Act of 1973 and WCAG 2.0, appropriately tailored to the specific circumstances of the University. ***All colleges, schools, departments, auxiliaries, research, and administrative entities that do not comply with the standards herein are responsible for any costs associated with remediating accessibility issues.***

Procurement

- Mason created an Architecture Standards Committee in 2008.
  - The Architecture and Standards Committee (ASC) is responsible for reviewing, verifying compliance and providing recommendations with regards to new/upgrade software or hardware procurement projects.

  - The ASRB is under the Architecture Standards Committee (ASC) and is responsible only for approving the beginning of a given project. This initial review will include an accessibility review by ATI and any other reviews necessary. At the ASRB's discretion, changes in the architecture, design, security, accessibility, data access, or other elements can be required before approving a project.

ASRB Reviews from 2011 - today
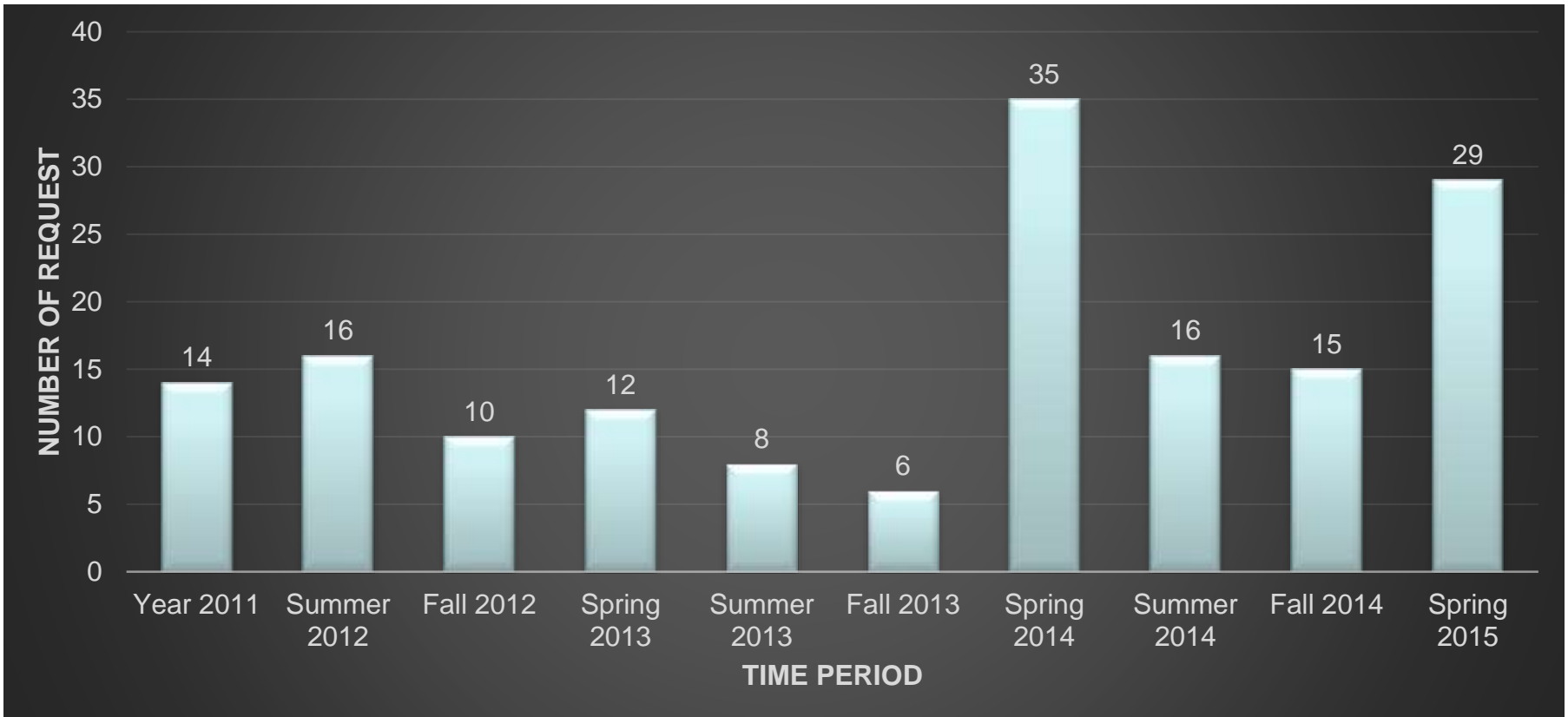
E.g., Sample Accessibility Language

- **GMU's Sample Accessibility language (RFP's, contracts and contract addendums):**

All e-learning and information technology developed, purchased, upgraded or renewed by or for the use of George Mason University shall comply with all applicable University policies, Federal and State laws and regulations including but not limited to Section 508 of the Rehabilitation Act (29 U.S.C. 794d), the Information Technology Access Act, §§2.2-3500 through 2.2-3504 of the Code of Virginia, as amended, and all other regulations promulgated under Title II of The Americans with Disabilities Act which are applicable to all benefits, services, programs, and activities provided by or on behalf of the University. The Contractor shall also comply with the Web Content Accessibility Guidelines (WCAG) 2.0.

Is it necessary to be this specific??

Other accessibility language examples – NCDAE, University of California

Web Accessibility - Testing Websites and Applications

- Where do I start?

- Do you have an automated testing application?

- Do you have students you could ask to test?

- Do you have a testing process?

- Minimum – ask for a VPAT (Voluntary Product Accessibility Template)
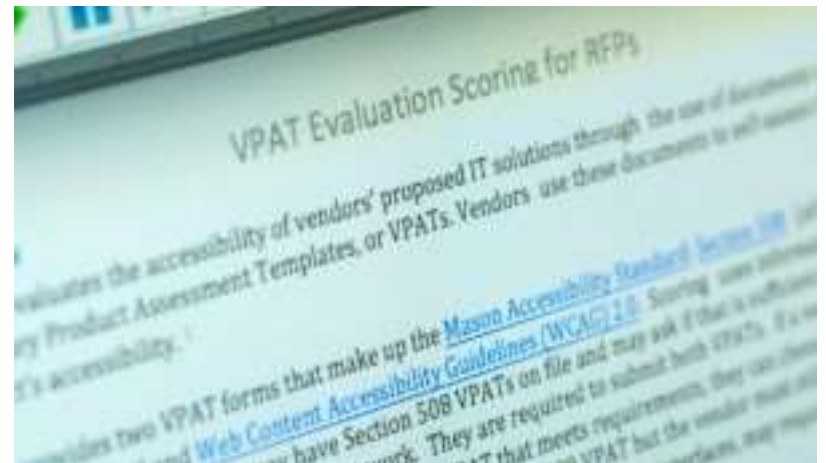
E.g., VPAT

Sect. 508 standard

SECTION 1194.22 WEB–BASED INTERNET INFORMATION AND APPLICATIONS

Criteria

(a) A text equivalent for every non-text element shall be provided (e.g., via alt, longdesc, or in element content).

Supporting Features

Supports

Remarks and Explanations

The product is designed to provide text equivalence for all images, using the alt attribute.

Criteria

(b) equivalent alternatives for any multimedia presentation shall be synchronized with the presentation

Supporting Features

Supports with exceptions

Remarks and Explanations

The product does not provide embedded multimedia presentations. Users provide their own content, which may include multimedia presentations.

Alt-text for images (i.e., non-text elements)

Taken from http://udloncampus.cast.org/page/policy_template
Guidance documents: http://ati.gmu.edu/policy/vpats-voluntary-product-accessibility-templates/

E.g., VPAT Matrix (GMU)

Hardware	Software (stand alone and web)	Websites	Developed components	Telecommunications	Other
Section 508 1194.25	Section 508 1194.21	Section 508 1194.21	Use WCAG 2.0 as checklist during development	Section 508 1194.23	Please contact ATI
Section 508 1194.26	Section 508 1194.22	Section 508 1194.22		VOIP? Please refer to Software	
Section 508 1194.31	Section 508 1194.31	Section 508 1194.31			
Section 508 1194.41	Section 508 1194.41	Section 508 1194.41			
	WCAG 2.0	WCAG 2.0	Use additional language – ATI must review prior to implementation		
	Videos included? If so, Section 508 1194.24	Videos included? If so, Section 508 1194.24			

Taken from: http://ati.gmu.edu/policy/vpats-voluntary-product-accessibility-templates/
Guidance documents: http://ati.gmu.edu/policy/vpats-voluntary-product-accessibility-templates/

Automated Testing Tools

- [SSB Bart's AMP](#)
- [OzArt](#)
- [WAVE](#)
- [WAT Toolbar](#)
- Chrome Color Contrast Analyzer
- Accessibility Evaluator for Firefox
- N-WAX (NHN Web Accessibility eXtension for Firefox)
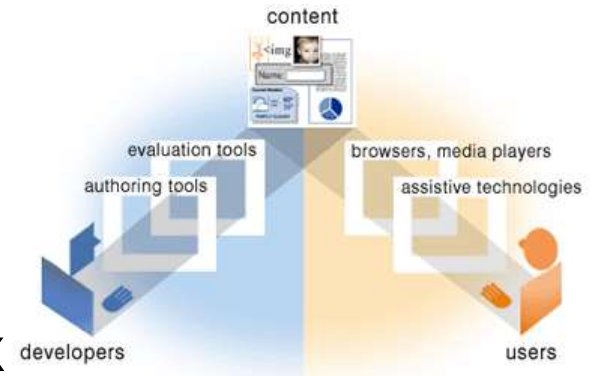
Manual Testing Tools

- Standard QWERTY keyboard
- JAWS
- NVDA
- Supplemental tools: VoiceOver (Mac/iOS); Dragon Naturally Speaking

- Browsers typically used: I.E., Firefox, Chrome
- Supplemental browsers: Safari

Manual Testing Checklist Items

- Keyboard Access
- Links and Link Titles (Example: "Click Here")
- Skip Navigation Link or Mechanism to skip to main content
- Logical Headings
- Table Headings
- Alt Text for Images
- Form Fields & Labels (Error Messages on Forms)

- For a complete listing of errors we commonly see visit: ATI Web Accessibility – Roles and Responsibilities – Web Developers
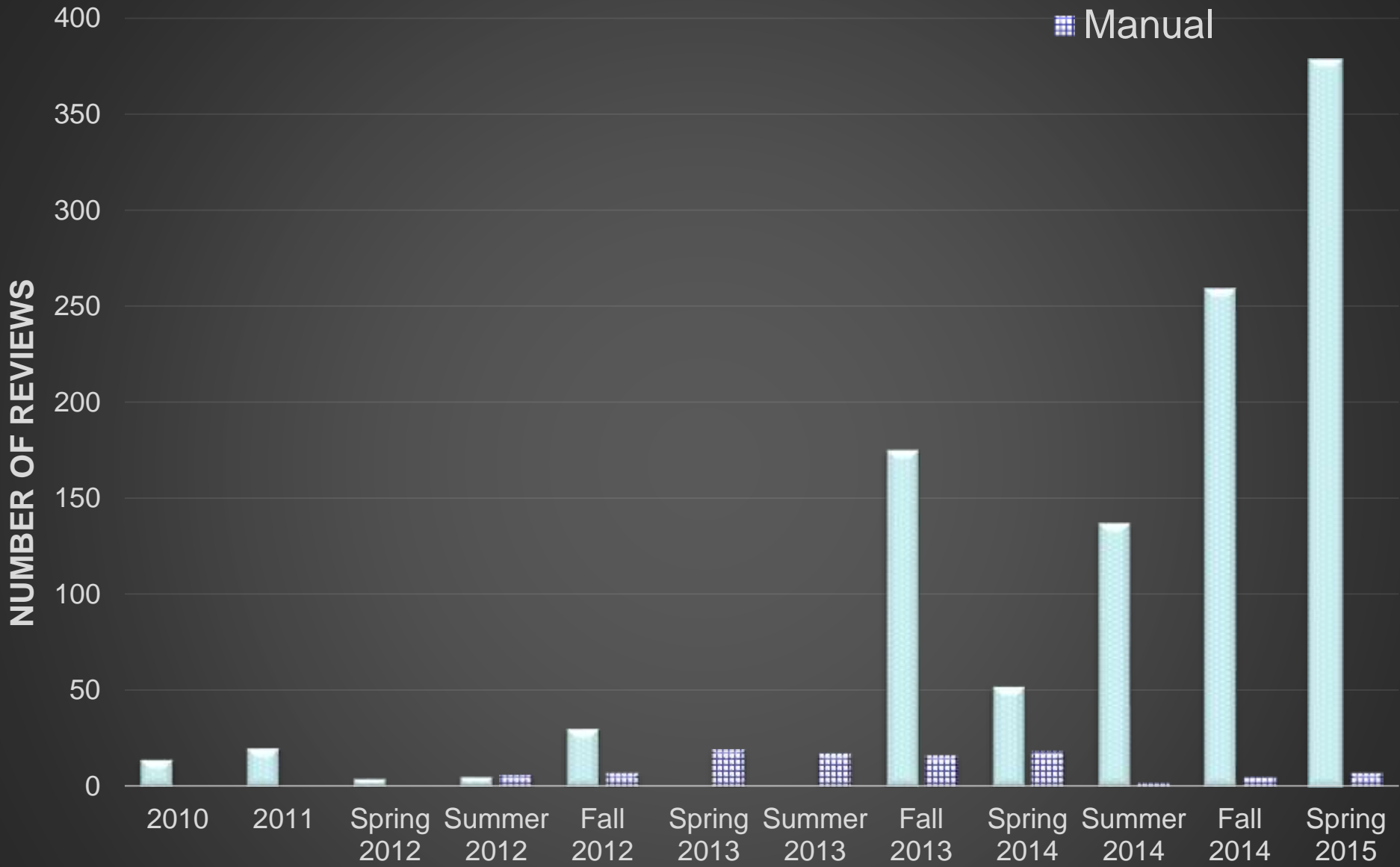
INTEGRATING ACCESSIBILITY INTO THE ONLINE COURSE DEVELOPMENT PROCESS

Things to help with accessibility

- Keyword searching.
- Ability to browse topics.
- Intuitive interface.
- Content optimized (OCR)
- Quick information retrieval.
- Good indexing (Metadata)

Baseline Design Considerations for Online Courses

- **Visual:**
  - Provide alternative text descriptions for all meaningful graphics (images, charts, graphs, SmartArt, objects)
  - Provide descriptions for videos where visual content is important to understanding subject matter.
  - Use styles in Office documents, headers to mark-up tables or frames (for websites)
  - Choose applications that support keyboard navigation and are compatible with screen readers

- **Hearing:**
  - Provide captions for all videos
  - For audio, provide transcripts

- **Cognitive, Neurological:**
  - Use consistent navigation, tab order, appropriate language level

Areas where Accessibility May Apply

- Obtaining information
  - E-Reserves
  - Databases
  - Audio and Video
  - Books (hard copy and electronic)

- Web-based material
  - Websites
  - Applications
  - Bibliography Software

- Procurement
  - Library has its own

How do Libraries apply?

Therefore, all libraries need to comply with Section 508's requirements for accessibility of public information technologies for both their patrons and their employees.

What is an "accessible" information technology?

Technology with a user interface that is accessible to individuals with disabilities. It can be used through a variety of senses and does not depend on one mode of use. For example, a system that provides output only in audio format would not be accessible to people with hearing loss, and a system that requires mouse actions to navigate would not be accessible to individuals who cannot use a mouse because of a dexterity or visual disability.

E-Learning Courses

Which also ties in Video and Documents

Sample – *ATI Course Accessibility Checklist*

Includes a review of the following areas:

1. Syllabus and Course Readings
2. Bb Learn
3. Word
4. PPT
5. PDF
6. Multimedia
7. Supplemental Applications

ATI Course Accessibility Checklist (Internal Use Only)
Updated 5/28/2015

The following checklist verifies that the instructional documents, audio, and video content used in Mason's distance education courses are in accordance with Section 508 and WCAG 2.0 Level AA accessibility guidelines. While not a comprehensive review of all the areas covered by these guidelines, this checklist does examine areas that would have the most significant impact on the ability of assistive technology users to independently access their instructional materials (e.g., al text, keyboard navigation, captions, transcripts, etc.).

PLEASE NOTE: This is NOT a comprehensive review of the accessibility of the faculty member's course. The reviewers will examine snapshots (i.e., Course readings, LMS layout/structure, 2-3 documents of each type – i.e., Word/PDF/PPT, 2-3 videos, and supplemental applications) of the elements highlighted in the table below and provide feedback/guidance to the instructor on how to correct any accessibility issues that are identified.

UNDERSTANDING THE REVIEW PROCESS:
Reviewers examined selected examples of the elements highlighted in the attached checklist (i.e., course readings, LMS layout/structure, 2-3 documents of each type – i.e., Word/PDF/PPT, 2-3 videos, and supplemental applications) and provided feedback and resources for the instructor on how best to remediate any accessibility issues that were identified.

Tools used for testing accessibility:

- Website Accessibility Reviews – WAVE Toolbar
- MS Office Accessibility Reviews – Built-in MS Office Accessibility Checker

Term:
Professor:
Course Evaluated:
Reviewer:

0.0 – Syllabus and Textbooks/Course Readings (Required and Supplemental)				
ID	**Textbooks/Course Readings**	**Yes**	**No**	**N/A**
0.1	Is an electronic equivalent provided for all print reading materials?			
0.2	Do all web articles/readings have a PDF/Word version available?			
	Syllabus	**Yes**	**No**	**N/A**
0.3	Course syllabus includes disability statement?			
0.4	Instructor offers multiple formats/options for			

Sample – *ATI Course Evaluation Document*

Includes the following:

- Priority Recommendations and Resources
- Understanding the Review Process (i.e., testing tools used and process)
- Findings

ATI Course Accessibility Evaluation

As a part of the Office of Distance Education's *Open Call Course Portfolio Review* process, the instructional materials used in your course (i.e., documents, audio, video, websites, and web applications) were examined to determine if they are accessible and usable by Mason students, including those with disabilities, in accordance with University Policy 1308.

This is **not** a comprehensive evaluation of all the areas covered by this policy; rather this review focuses on those areas that have traditionally had the most significant impact on the ability of students with disabilities to independently access instructional materials (e.g., alternative text descriptions, keyboard navigation, captions, transcripts, etc.).
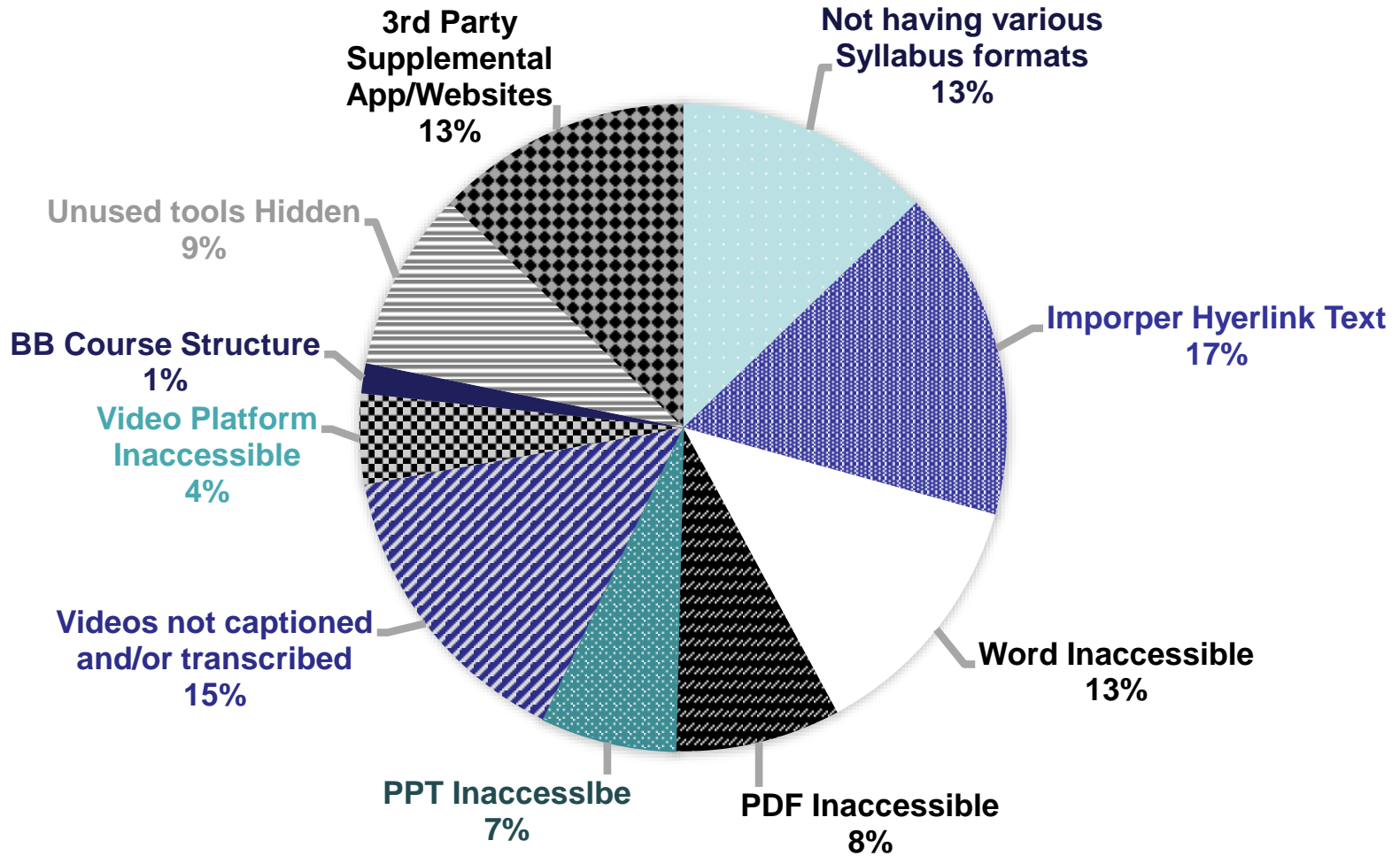
COURSE:

- · **Term:**   Spring 2015
- · **Professor:**
- · **Course Evaluated:**
- · **Course Reviewer:**

PRIORITY RECOMMENDATIONS and RESOURCES:

Priority Issue	Action Plan
Ensure all course videos have synchronized captions and/or transcripts.	Go to the ATI's Accessible Media Request page for information on requesting this service.
Ensure all course videos are streamed through an accessible video playback platform (i.e., Kaltura, YouTube).	Upload course videos using the "***Kaltura My Media***" link in MyMason\Courses Tab. For assistance, contact the ATI Office and/or Learning Support Services.
Ensure that PowerPoint Presentations and Word Documents are accessible.	Visit ATI's Guide to Creating Accessible Electronic Materials (PDF – Section 2: Part II and Part III). Visit ATI Website: Creating Accessible Documents

DE Course Review Findings

Pie chart: DE Course Review Findings

- Not having various Syllabus formats — 13%
- Imporper Hyerlink Text — 17%
- Word Inaccessible — 13%
- PDF Inaccessible — 8%
- PPT Inaccesslbe — 7%
- Videos not captioned and/or transcribed — 15%
- Video Platform Inaccessible — 4%
- BB Course Structure — 1%
- Unused tools Hidden — 9%
- 3rd Party Supplemental App/Websites — 13%

NATIONAL ASSOCIATION OF ADA COORDINATORS

Training and "Marketing"

- You can't "sell" accessibility – but you can "share" information that could make it easier for everyone:

CLEARING A PATH
FOR PEOPLE WITH SPECIAL NEEDS
CLEARS THE PATH FOR EVERYONE!

Additional Resources to Consider

- Web Compliance
  - Ex: NC State Global Accessibility Awareness Day Website Challenge
- Policy
  - Ex: Example policies in higher education
- Procurement
  - Ex: George Mason University Procurement – ASC Review Board
- Training/Awareness
  - Ex: University of Wisconsin-Madison Web Accessibility 101
- Buy-In
  - Ex: Are you the next example?

Questions and Answers

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- **Phone: 703-993-9815**
- **Web: http://ati.gmu.edu**
- **Twitter: @AccessibleMason**