



# Higher Education Spotlight: Motivating Accessibility Adoption on Campus


Carolyn Phillips, Interim Director | Center for Inclusive Design & Innovation | Georgia Tech  
ATIA – February 1, 2019





# Learning Objectives

- **Identify New Educational Objectives for Higher Education**
- **Define Best Practices for assisting student requiring AT**
- **Identify 3 challenges faced by AT professionals in Higher Education**



# Motivating Accessibility Adoption on Campus

- **Introduction & Updates on Accessibility**
- **Momentum Year!**
- **The Legal Landscape**
- **Accessibility Services**
- **Accessibility Training**
- **Q&A – How Can We Help You?**





Consider this -

**Disability  
is often a  
consequence of  
the environment.**

# Considering: The Profitable Carrot and the Litigious Stick

**Improved User  
Experience  
for everyone**

**+**

**Reduction of  
Complaints/Litigation**



# What motivates change?



WebAIM's Hierarchy for  
Motivating Accessibility Change

# A significant challenge is the sheer scope Make sure you have plans to motivate . . .

Creation of enterprise-wide policy and planning

- Input from key stakeholders (ongoing input from all)

Widespread buy-in from all parts of campus

- Administrative personnel
- Technical personnel
- Faculty
- Staff
- Specific units (e.g., Procurement, HR, Sponsored Programs)

Strategic communications

Training and supports for the work each are expected to do

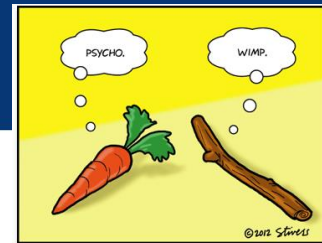
Ongoing systems of feedback and continuous improvement

## Critical work must be done

...to consider motivation at both the system  
level and the individual level



# Think of your own motivation. For me . . .



1. Knowing my efforts are part of a larger collective that will make a difference
2. Understanding clearly what I am to do
3. Knowing I will be supported to succeed and not left to myself to implement
4. Knowing my efforts are valued and not just expected (e.g., don't just put extra onto everyone's plate)

# Understanding clearly what I am to do

For example

Explicit descriptions of who does what

Portland Community College Web Accessibility Guidelines 2015

[https://www.pcc.edu/instructional-support/wp-content/uploads/sites/17/2017/11/WebA11Y-HB2\\_Print-HiRes.pdf](https://www.pcc.edu/instructional-support/wp-content/uploads/sites/17/2017/11/WebA11Y-HB2_Print-HiRes.pdf)

## WHO's Responsible for Accessibility of Online Courses?

### Instructors, Distance Education and Disability Services

- ▶ **Test** the accessibility of software and web apps used in online courses.
- ▶ **Develop** Accessibility Plans proactively when barriers are found.
- ▶ **Work** together to identify and implement appropriate accommodations when barriers are encountered.

#### Instructors RESPONSIBILITIES



**As** the subject matter expert and the course developer, an instructor:

- Designs** clear and consistent navigation.
- Writes** alternative text descriptions for images.
- Creates** documents using accessibility guidelines ([pcc.edu/access](https://pcc.edu/access)).
- Retains** original files (PowerPoint, Word, etc.)
- Uses** captioned media whenever possible.
- Writes** math and science with MathML (D2L equation editor), LaTeX, MathType or Libre Office.
- Checks** accessibility of required software & web applications used in course at [pcc.edu/access](https://pcc.edu/access).
- Supplies** DL and DS with course materials upon request for an accommodation.
- Prepares** Accessibility plans for inaccessible content.

#### Distance Education (DL) RESPONSIBILITIES



**As** the online course development facilitator and faculty resource, Distance Education (DL):

- Provides** media captioning for DL course accommodations.
- Assists** DS with retrofitting course material for timely accommodation.
- Offers** training sessions (F2F & Online) & over-the-shoulder assistance.
- Develops** training materials (Accessibility Guidelines Handbook & Quick Guide).
- Reviews** courses for accessibility & provides feedback & support to instructors.
- Supports** Accessibility Plan development to proactively address course barriers.
- Facilitates** subject area accessibility studies.
- Maintains** [pcc.edu/access](https://pcc.edu/access) website with how-to video tutorials and step-by-step instructions.

#### Disability Services (DS) RESPONSIBILITIES



**As** a student & faculty resource, with expertise in alt formats and assistive technologies, DS:

- Increases** awareness of the disability experience & works with staff & faculty to proactively reduce barriers by
  - ▶ **Hosting** open events,
  - ▶ **Offering** drop-in hours, & individual consultations.
- Reviews** documentation of disability & determines student eligibility for accommodation.
- Leads** efforts to ensure students are appropriately accommodated.
- ▶ **Notifies** faculty & DL when an accommodation is required.
- ▶ **Supplies** students with an accessible format of the textbook.
- ▶ **Provides** alternative format of PDFs, math/science and publisher PPTs.
- ▶ **Administers** other reasonable auxiliary aids & services.



# Knowing I will be supported to succeed

## Not a “one and done”

- Need to create technical assistance supports
  - Add accessibility to help desk?
  - Place or assign accessibility point persons in units or departments
    - Regularly share tips or other info at department meetings
    - Available for support individually
  - Establish accessibility mentors amongst peer groups
  - Online community of practice
- Need to keep training alive
  - New faculty and staff
  - Additional training when performance is not as intended

# Knowing my efforts are valued



- Acknowledge
  - Certifications
  - Badging
- Promotion & Tenure acknowledgment
- Awards, notice
- Peer group value

# Considering DOJ Settlements

- High Profile Settlements
- Requirements
- Built Environment
- Virtual Environment:
  - WCAG 2.0 (Level AA) Applied
  - Web Accessibility, which includes captioning
  - Mobile Accessibility
  - Appoint Web Accessibility Coordinator
  - Adopt Web Accessibility Policy







## The Momentum Year

- **Accessibility & Affordability**
- **Efficiency,**
- **Retention Rates**
- **Action Items: Reach Out to Your Provosts**



# Successful Practice: AMAC Accessibility

AMAC was created by USG in 2006 to serve all of USG's accessible textbook needs. AMAC has grown exponentially and is now a national and international model for quality accessibility service delivery and research.

AMAC Accessibility provides practical solutions for challenges faced daily by individuals with disabilities.

We focus on solutions that offer utility, usability, and durability.

AMAC offers services including disability compliance consultation, braille, captioning, accessible digital content, and assistive technology.



# Proactive Approach to Assistive Technology, True Accessibility and Inclusion

- **Reduced Legal Risks**
- **Positive Public/Student Relations**
- **Improved Accessibility & Usability for All Students**
- **Help Meet/Exceed Goals**

# E-text Services & AccessText Network

E-text Services produce and provide high-quality e-text in formats such as PDF, DOC, PPT, DAISY, EPUB, and HTML.

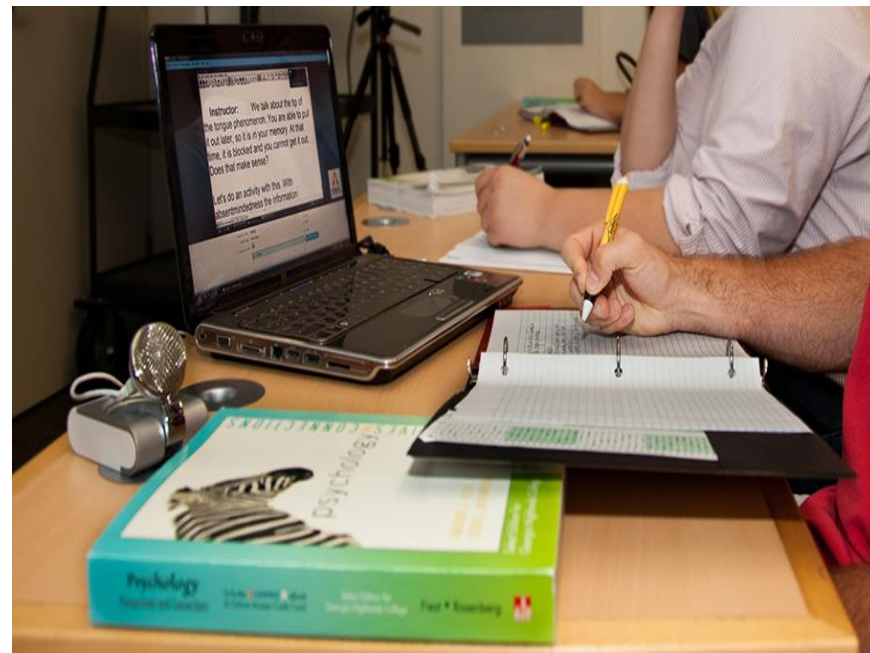
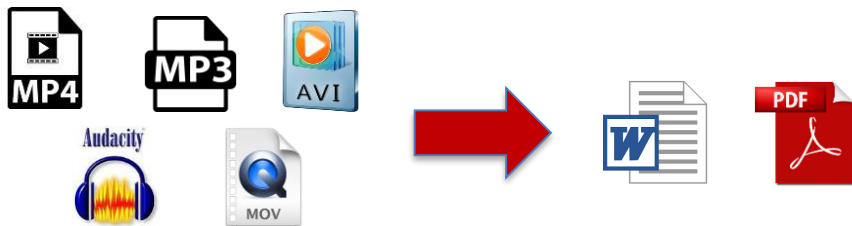




# Captioning & Described Media Services

[Captioning Services](#) provide **real-time remote live-captioning** for college lectures, seminars, and labs, as well as special events such as conferences, graduations, and workshops.

We also provide professionally edited **post-production transcription and closed captioning** for pre-recorded content.





# Audio Description Services

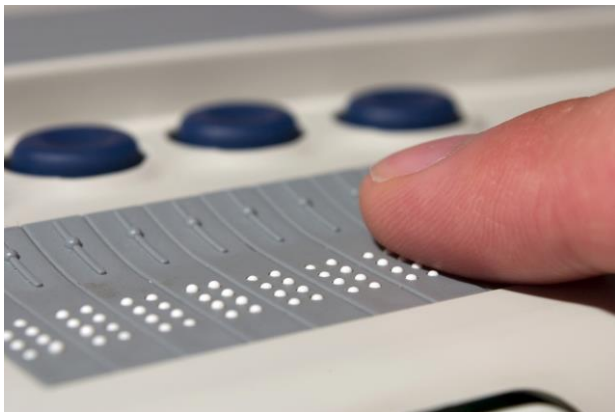


AMAC Accessibility's [Audio Description Services](#) narrate and [describe](#) the visual components in multimedia to accommodate persons who are blind or low-vision.



# Braille Services

Braille Services produce high-quality electronic or embossed braille and custom tactile graphics.



# Why Request Braille Over Other Alternative Formats?

Several factors can affect the decision to choose Braille as the best format for a request.

- Student's Preference and Experience
- Timeline
- Subject Matter
- Complexity Level
- Spatial Material
- Math/Science Formulas
- Tactile Graphics

# Need Braille, What Now?

## Important Points to Remember

- Quote approval/PO processes can sometimes take longer than expected
- Space needed to store volumes
- Develop process to organize braille copies and track shipments received.
- Complex Braille Orders can take up to six months to complete
- It's crucial to educate faculty about the importance of providing a class timelines and book information well in advance of the course start date.

# Web Accessibility Group for Higher Education (WAG) – Norah Sinclair



The [Web Accessibility Group](#) (WAG) is housed at AMAC Accessibility at Georgia Tech.

We help bring together individuals in higher ed to collaboratively navigate the complex requirements of state and federal accessibility standards and guidelines.





# WAG

WAG is funded and supported by the State of Georgia [ADA Coordinator's Office](#), as part of the broader AccessGA Initiative, a statewide partnership of government [agencies](#), [technical colleges](#), and [universities](#).



# AccessGA



[AccessGA](#) is a joint initiative of the State of Georgia ADA Coordinator's Office, AMAC Accessibility, and the [Georgia Technology Authority](#) (GTA).

The objective is to support Georgia state agencies that strive to provide equitable and timely access to their employees, students, and clients with a wide range of disabilities.

## Benefits and services include...

- Access to live monthly webinars and archived [webinars](#)
- Technical assistance and hands-on training
- Web accessibility evaluations and resources
- Periodic [newsletters](#)
- Up-to-date [wiki](#) of ICT accessibility resources and information
- Special events

# ICT Compliance & Accessible UX Services

Accessibility Compliance Consultations offer training, technical assistance, customer support, and evaluation of overall website accessibility and usability testing





The [Certified Assistive Technology Team](#) conducts on-site or remote assessments and offers demonstrations, training, and assistive technology for learning, work, and daily living.

Reengineering the Classroom.

The AT team hosts Georgia's [Assistive Technology Act](#) program, [Tools for Life](#).



# Accessibility Research

Our [research](#) primarily focuses on students with disabilities, who are traditionally underrepresented in higher education.

[Disability](#) spans across all age, gender, ethnic, racial, cultural, and socio-economic boundaries.

AMAC Accessibility also studies how corporate, government, and non-profit organizations support customers and employees with disabilities.





# Massive Open Online Course (MOOC) Information and Communication Technology (ICT) Accessibility



<https://www.edx.org/course/information-communication-technology-ict-ict100x>

# **Defining People with Disabilities**

How People with Disabilities Use the Web, Emerging Markets and Assistive Technology Solutions

# How People with Disabilities Use the Web

Auditory

Cognitive and Neurological

Physical

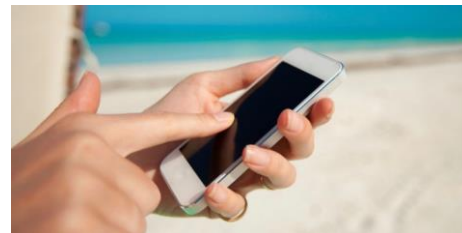
Speech

Visual



# Mobile Everywhere, Anywhere

- Noisy Spaces
- Using One Hand
- Outdoor use in bright light
- Small-sized touchscreens
- Multitasking-Driving or Walking
- All Ages Using Mobile



# More than Just Phones & Tablets

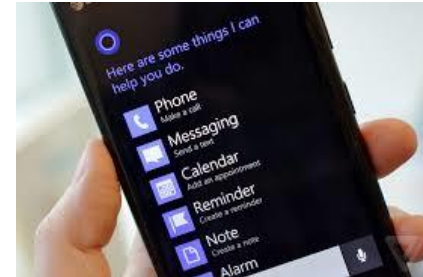
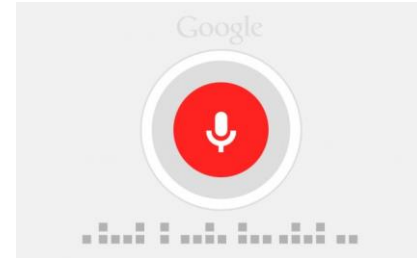
- Car interfaces
- Videogame controllers
- Smart watches
- Emerging Markets





# Speech-to-Text

- Siri (Apple)
- Google Now  
(Google)
- Cortana  
(Microsoft)



# TTS and STT Combination – Apple HomePod, Amazon Echo and Google Home



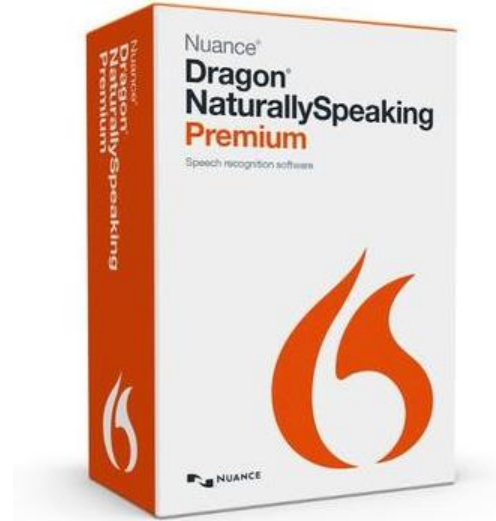
HomePod, Echo, and Home size comparison

# Speech Recognition Software

Turn spoken words into text

Connect with the timing of your thoughts

Dictation speed 70 to 100 words per minute



# ClaroRead



Text-to-Speech

Visual Highlighting

Read back any on-screen  
text and program  
commands

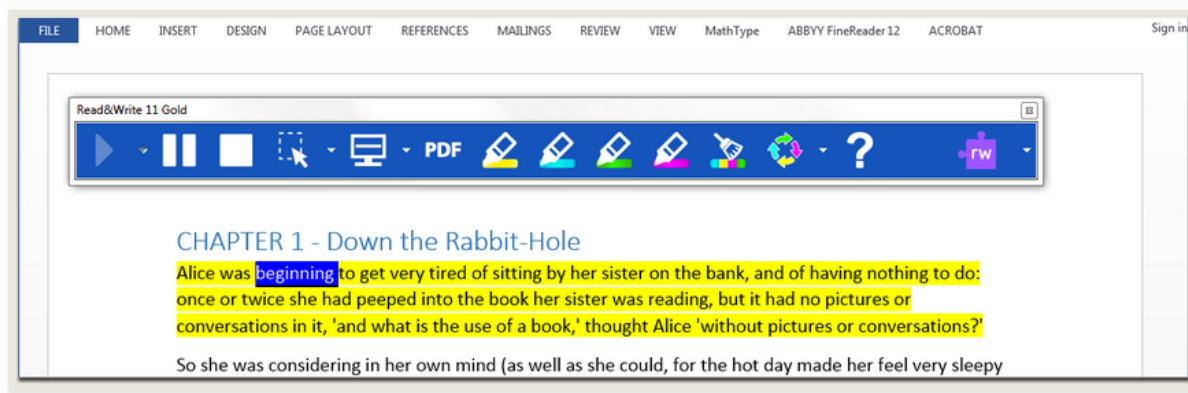
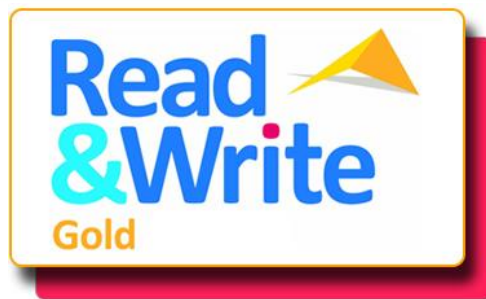
High Quality Screen Reader

Keyboard Echo

Save to Audio

# Read & Write Gold

- Text-to-Speech software
- Reads Word, PDF files and web pages as long as they're accessible
- Text Highlighting
- Allows for creation of audio version
- Provides customizable toolbars





# Tips & Techniques for Testing for Accessibility

# Step Away from the Mouse!

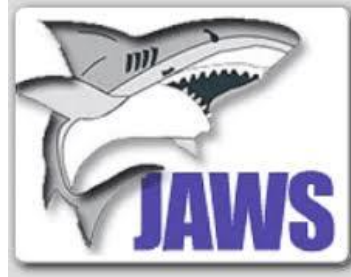
## Keyboard Accessibility Covers a Multitude of Sins

- Tab and Reading Order
- Visual Focus
- Interactive Form Controls
- Keyboard-Triggered Event Handlers



# Screen Readers

- JAWS
- NVDA
- VoiceOver (Mac)
- VoiceOver (iOS)
- TalkBack for Android
- Window-Eyes



# Testing with Browsers

- IE 11
- Firefox - Extended  
Support Release (ESR)
- Safari



# Refreshable Braille Displays

- **The World of Digital Touch**





# Testing with Mobile Devices

- Use Latest Operating System when Possible
  - Apple: iOS
  - Android: Pair Google's Nexus with Latest OS



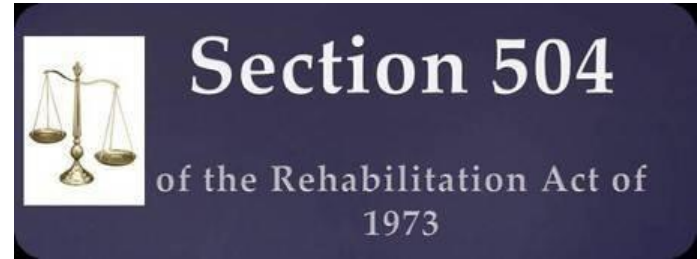
# Functional Differences Between iOS & Android

- iOS
  - Closed Architecture = Predictability
  - Stability
  - Hardware/Software Integration
  - OS updates pushed out simultaneously
- Android
  - Fragmentation of software and hardware
  - Many more devices on market
  - Commitment to accessibility not comparable

# **Legal Landscape Related to Digital Accessibility**

# Section 504

A civil rights law to prohibit discrimination on the basis of disability in programs and activities, public and private, that receive federal financial assistance.



# Americans with Disabilities Act (ADA)

Signed into Law in 1990

Civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public.

Applies to Information and Communication Technology (ICT) Accessibility





# Section 508

**1998 Amendment to the United States Workforce Rehabilitation Act of 1973, a federal law mandating that all electronic and information technology developed, procured, maintained, or used by the federal government be accessible to people with disabilities.**



# Section 508 Refresh Continued...

Section 508 of the Rehabilitation Act, as amended in 1998

## Section 508 *Refresh* (ICT Refresh)

- U.S. Access Board Final Rule published Jan. 18, 2017

## Compliance Date/Safe Harbor Provision

- Comply by Jan. 18, 2018
- Safe Harbor: Legacy ICT that has not been altered after compliance date



# Who Enforces the Law?

The DOJ in conjunction with Office of Civil Rights (OCR) enforces Titles II of the ADA, and Section 504 of the Rehabilitation Act of 1973.



# 21<sup>st</sup> Century Communications and Video Act (CVAA)

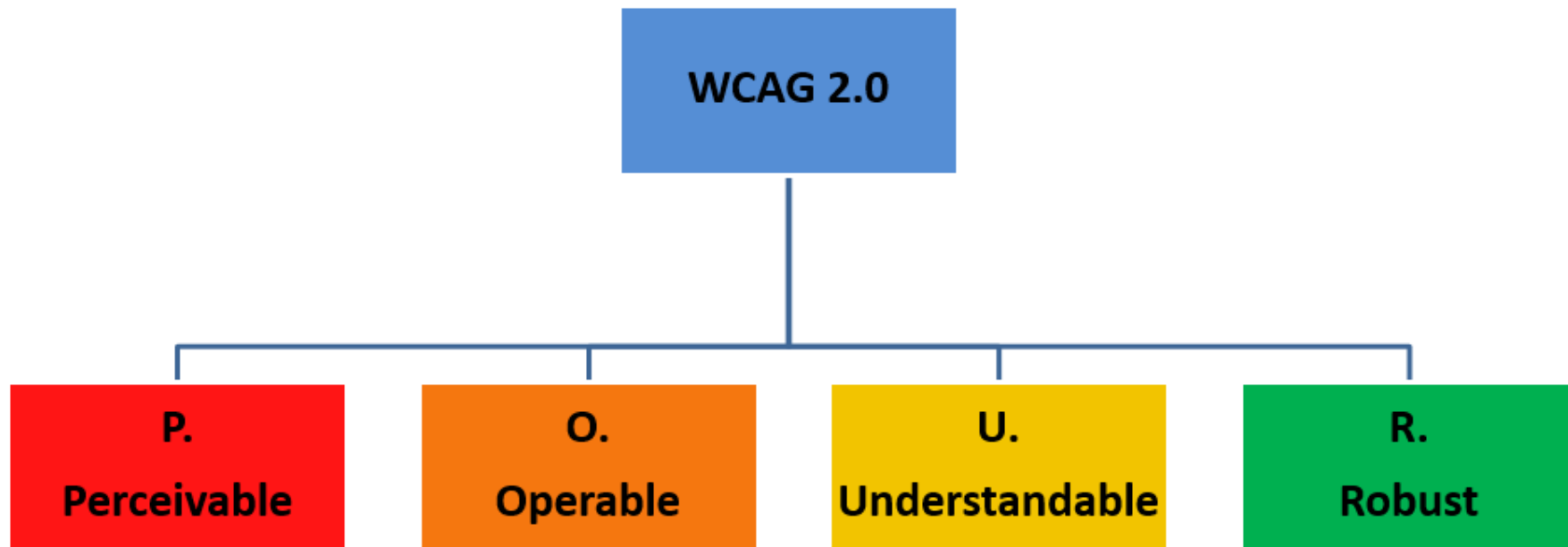
Twenty-First Century Communications and Video Accessibility Act – signed into Law Oct. 8, 2010

Updates federal communications law to increase the access of persons with disabilities to modern communications

Title I: addresses communications access to make products and services using Broadband fully accessible to people with disabilities

Title II: Makes it easier for people with disabilities to view video programming on television and the Internet

# Basic Principles of WCAG 2.0





# WCAG 2.1 is Here!

WCAG 2.1 Became a Recommendation June 5, 2018

Provides 17 additional success criteria to address:

- Mobile Accessibility
- People with Low Vision
- People with Cognitive and Learning Disabilities

# W3C-WAI: Web Accessibility Tutorials

Created for:

- Web Developers
- Web Designers
- Content Authors
- Project Managers

<http://www.w3.org/WAI/tutorials/>

# W3C-WAI: Easy Checks – A First Review of Web Accessibility

## Covers the following:

- Page Title
- Image Text Alternatives
- Headings
- Contrast Ratio
- Resize Text
- Keyboard Access and Visual Focus
- Forms, Labels and Errors
- Multimedia
- Basic Structure Check

<http://www.w3.org/WAI/eval/preliminary.html>

# Perspective Videos: W3C-WAI

## Perspectives Videos



[Keyboard Compatibility](#)



[Clear Layout and Design](#)



[Large Links, Buttons, and Controls](#)



[Customizable Text](#)



[Understandable Content](#)



[Colors with Good Contrast](#)



[Text to Speech](#)



[Video Captions](#)



[Voice Recognition](#)



[Notifications and Feedback](#)

# Accessible Content

## Formats

- Microsoft Word documents
- PowerPoint presentations
- Accessible PDFs from accessible source documents





# Accessible PowerPoint

Learning, Doing and Teaching

# A Few Keys

- Slide Master View
- Reading order
- Unique slide titles
- Hidden slide titles
- Audio and video
- Animation considerations
- Speaker notes

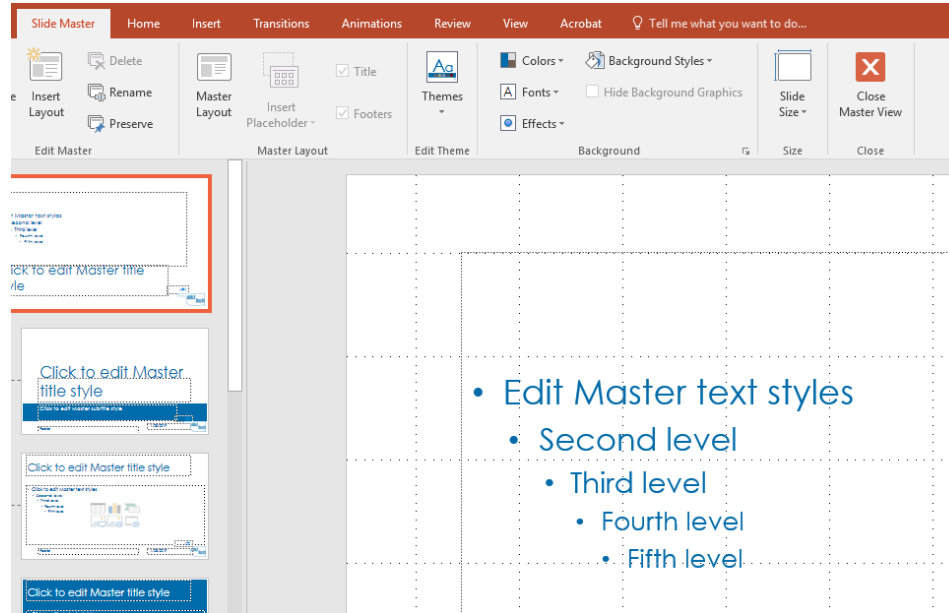
# A Few Reminders

- Text equivalents
- Color contrast
- Color use
- Useful links

# Your Friend, Slide Master

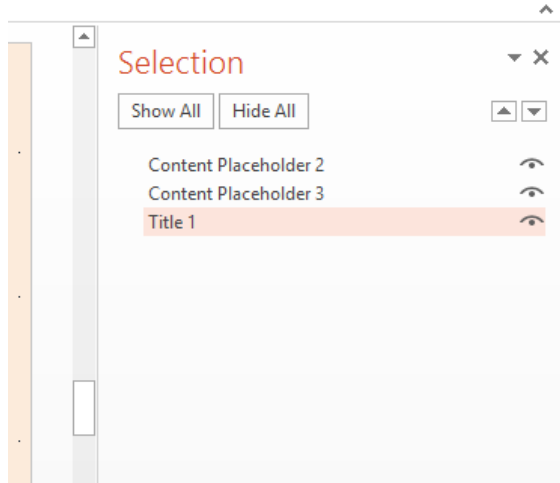
- The place to adjust and create layouts
  - As opposed to editing on the fly, individually
- Manage content order and content placeholders
- Create new slide Layouts that you can pick from later
- Share changes across a Theme
  - Reuse and recycle

# Slide Master View



- Edit Master text styles
  - Second level
  - Third level
  - Fourth level
  - Fifth level





- View reading order (bottom to top of the list)
- Also hide content here

## Selection Pane

# Using File > Save As

1. In Word, click "File", then "Save As"
2. Next, select where you'll save the file
3. Change the type to PDF and click Options
4. In the options, make sure Document properties & Document structure tags for accessibility are selected.

File name:

Save as type:

Authors: [Prince, Lyssa](#) Tags: [Add a tag](#)

Optimize for: ☒ Standard (publishing online and printing) ☐ Minimum size (publishing online)

☒ Open file after publishing

**Options...**

Options

Page range

☒ All ☐ Current page ☐ Selection ☐ Page(s) From:  To:

Publish what

☒ Document ☐ Document showing markup

Include non-printing information

☐ Create bookmarks using: ☒ Headings ☐ Word bookmarks

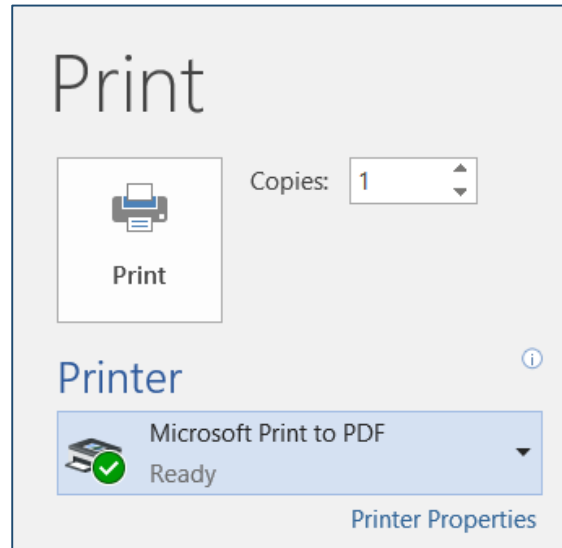
☒ Document properties ☒ Document structure tags for accessibility

PDF options

☐ ISO 19005-1 compliant (PDF/A) ☒ Bitmap text when fonts may not be embedded ☐ Encrypt the document with a password

**OK** **Cancel**

Print to PDF – don't use this one!



# Conversion to PDF

- Never “print to PDF” from Word, PowerPoint, or anything and expect it to be accessible
  - Produces a PDF that is image-only and has no tags
  - Useful for print-only documents, not digital documents
- Correct methods
  - File > Save As in Word, PowerPoint, etc.
  - Acrobat PDF conversion plug-in (File > Save as Adobe PDF **OR** Acrobat tab)
    - \*Only if you have Acrobat installed

# PDF Accessibility

- Match “image” and back-end structure
  - Use **PDF tags** to provide hidden, back-end structure
  - Tags are used by AT, such as screen readers
- Source document is supreme!
  - Easier to remediate
  - Easier to work with in general

# ATOB Volume 14

- Call for Manuscripts will open in Spring 2019.
- Theme:
  - AT for Literacy
  - This volume of ATOB invites authors to submit articles that showcase the use of assistive technology for improving literacy outcomes and benefits.
- Sign up for our mailing list to receive notice.
- Review ATOB's Editorial Policy and Manuscript Preparation Guidelines for Authors to learn more about the publication.



# ATOB Volume 14: AT for Literacy

Call for Manuscripts: April 15 - June 14, 2019

*Literacy is multidimensional. Assistive technology can be used to improve students' outcomes in traditional literacy instruction focused on reading and writing. Literacy also goes beyond reading and writing academic text. It is an important component in learning how to effectively use AAC devices. Literacy is used in social stories for students with autism. Nowadays, the term literacy also includes "digital literacy." That reinforces the use of technology to produce work across subject areas, effectively collaborate and communicate. Literacy, including digital literacy, is often a requirement for employment and independent living.*

*This volume of ATOB invites authors to submit articles that showcase the use of assistive technology for improving literacy outcomes and benefits. Articles may focus on any target population (e.g., young kids, students, postsecondary students and adults, individuals with various abilities and needs) for numerous purposes (e.g., learning, communication, social interactions, employment, independent living) Authors submitting articles to this issue are required to draw conclusions about how technology can support any dimension of literacy for individuals with disabilities.*

# How Can We Help You?

- **Identify 3 challenges faced by AT professionals in Higher Education**

# Goal: Inclusion & Accessibility for All





**Our Question to You:  
What have You Learned today?**



**Liz Persaud**

Program and Outreach Manager  
[liz.persaud@gatfl.gatech.edu](mailto:liz.persaud@gatfl.gatech.edu)



**Martha Rust**

AT Access Team Manager  
[martha.rust@gatfl.gatech.edu](mailto:martha.rust@gatfl.gatech.edu)



**Danny Housley**

AT Acquisition Manager  
[danny.housley@gatfl.gatech.edu](mailto:danny.housley@gatfl.gatech.edu)



**Ben Jacobs**

Accommodations Specialist  
[ben.jacobs@gatfl.gatech.edu](mailto:ben.jacobs@gatfl.gatech.edu)



**Carolyn Phillips**

Director, Tools for Life  
[carolyn.phillips@gatfl.gatech.edu](mailto:carolyn.phillips@gatfl.gatech.edu)



**Rachel Wilson**

AT Specialist  
[rachel.wilson@gatfl.gatech.edu](mailto:rachel.wilson@gatfl.gatech.edu)



**Sam Peters**

Program Specialist  
[speters37@gatech.edu](mailto:speters37@gatech.edu)



**Sarah Endicott**

Research Scientist  
[sarah.endicott@design.gatech.edu](mailto:sarah.endicott@design.gatech.edu)



**Tori Holder**

Outreach Scientist  
[tori.holder@gatfl.gatech.edu](mailto:tori.holder@gatfl.gatech.edu)



**Ciara Montes**

AT Specialist  
[ciara.montes@gatfl.gatech.edu](mailto:ciara.montes@gatfl.gatech.edu)



**Annabel Joyner**

Graphic Design Intern  
[ajoyner8@gatech.edu](mailto:ajoyner8@gatech.edu)



**DeeDee Bunn**

Speech-Language Pathologist  
[dbunn6@gatech.edu](mailto:dbunn6@gatech.edu)



**Ben Satterfield**

Research Associate  
[rsatterfield8@gatech.edu](mailto:rsatterfield8@gatech.edu)





# Thank you!

## We are Making Progress!

