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Good Practices White Paper Series

# AMAC ACCESSIBILITY

A Scalable Model for Centralizing, Producing, and  
Serving Accessible Instructional Materials for  
Students with Disabilities in U.S. Higher Education



Global Initiative for Inclusive Information  
and Communication Technologies



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June 2018



## About G3ict

G3ict is an advocacy initiative launched in December 2006 by the United Nations Global Alliance for ICT and Development, in cooperation with the Secretariat for the Convention on the Rights of Persons with Disabilities at UNDESA (United Nations Department of Economic and Social Affairs). Its mission is to facilitate and support the implementation of the dispositions of the Convention on the Rights of Persons with Disabilities (CRPD) promoting digital accessibility and assistive technologies. Participating organizations include industry, academia, the public sector, and organizations representing persons with disabilities. G3ict organizes or contributes to awareness-raising and capacity-building programs for policy makers in cooperation with international organizations, such as the ITU (International Telecommunications Union), UNDESA, ILO (International Labor Organization), UNESCO (United Nations Educational, Scientific and Cultural Organisation), UNITAR (United Nations Institute for Training and Research), UN Global Compact, and the World Bank. In 2011, G3ict launched the M-Enabling Summit Series ([www.m-enabling.com](http://www.m-enabling.com)) to promote innovation in accessibility for persons with disabilities and older persons, in cooperation with the ITU and the U.S. Federal Communications Commission (FCC). G3ict produces jointly with ITU specialized reports which are widely used around the world by policy makers involved in the implementation of the CRPD.

G3ict's professional development division, the International Association of Accessibility Professionals (IAAP), provides professional development and certification services in ICT accessibility with active members in 42 countries. G3ict is funded by contributions from corporations and foundations. Its programs are hosted by international organizations, governments, universities, and foundations around the world. [www.g3ict.org](http://www.g3ict.org).

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**Editor: Christine Forget Leblais, G3ict.**

**Contributors (AMAC Accessibility): Carolyn Phillips, Ricardo Garcia Bahamonde, Samantha Evans.**

**Design: by Manuel Ortiz [www.modesignstudio.com](http://www.modesignstudio.com)**

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# Foreword

Virtually all countries around the world have become parties to the Convention on the Rights of Persons with Disabilities (CRPD) since it was launched 11 years ago, but most have yet to enact rights-based legislation specifically mandating that students with disabilities be accommodated and all educational digital resources and services be made accessible. While social protection types of legislation have helped drive progress in accommodation in many countries, ensuring that higher education digital contents and services are fully accessible to students with disabilities will likely remain a challenge for years to come.

With the Marrakesh Treaty, new advocacy and legislative initiatives have recently gained momentum around the world to promote copyright exceptions, allowing trusted intermediaries to provide accessible contents and services to persons with disabilities in alternative formats. This is essential to institutions of higher education that are seeking in many countries to provide accommodation services and accessible digital contents to all students.

The objective of this white paper is to document a practical solution to accelerate the actual implementation of accessible digital contents and services to students with disabilities. Indeed, while much has been written about the legal aspects of implementing copyright exceptions, little literature is available on viable business models and processes for colleges and universities to meet the need of students with disabilities. Addressing accessibility in an increasingly diversified and complex digital learning environment can become a complex task. It is our hope in this White Paper to address, and fill, this accessibility gap.

This paper was initiated to present the inner workings of AMAC Accessibility, a research center of the College of Design, Georgia Institute of Technology. AMAC is one of G3ict's long-time partners in promoting digital accessibility in the United States and around the world. Our objective is to share the experience and results of AMAC's unique model. It involves hundreds of universities sharing in the expertise and capabilities of a single accessibility center providing research, support, and production services for all aspects of students' accommodation and modes of accessible digital contents.

Universities pursuing digital accessibility strategies in countries where copyright exception legislations have been enacted may consider looking at the AMAC blueprint to scale up their services so that they can be more effective, affordable, and dependable. For the many institutions of higher education in the United States still looking at ways to enhance their services to students with disabilities, the AMAC community of expertise and business model may also be an attractive solution.

G3ict would like to express its sincere appreciation to AMAC Accessibility, its leadership, management team, and many staff members who enthusiastically shared their experience and perspectives. Beyond an exceptional concentration of expertise, the AMAC team carries and communicates an inspiring and compelling sense of mission.



Axel Leblois  
Executive Director, G3ict

# How Higher Education Leads the Digital Inclusion Revolution



**By Carolyn Phillips<sup>1</sup>**

We are at a transformational time and turning point in the history of the inclusion movement, both nationally and internationally, with 188 of 198 nations now parties to the United Nations Convention on the Rights of Persons with Disabilities. True inclusion provides real education and work opportunities, the ability to live independently, and access to participation in all aspects of society. Increasing convergence among laws, regulations, and standards is furthering the development of accessible media and assistive technologies and extending digital access to the growing populations of users with and without disabilities.

It's exciting to see the new generations of students with disabilities—many of them taught to understand their rights and to participate in the development of individual education plans thanks to the Individuals with Disabilities Education Act (IDEA) and related progressive legislation. Compared to five years ago, increasing numbers enter higher education using technology, knowing their rights, and understanding the accommodations they need. With those convergent forces, many outcomes defined by disability legislation over the past few years are materializing at a rapid pace.

Universities and colleges are now at the forefront of a true revolution in providing content and services for independent living in a digital world. Taking a holistic view of the continuum of life, this makes them one of the most important agents of change toward digital, economic, and functional independence for persons with disabilities.

Naturally, the earlier students with disabilities develop those digital independence skills in primary and secondary education, the better; however, the experience gained leveraging accessible and assistive technologies as independent learners in all education environments constitutes a powerful springboard for their future professional lives. When students can take their accommodation with them, move fluidly from class to class carrying their assistive solution on a mobile device in their pocket, ready at all times, they are better prepared to succeed in the workforce and in life.

More students with disabilities are entering colleges or universities today than over the past decade, and more are self-identifying for accommodations, including students in technical, scientific, and engineering disciplines. This results in the need for more coordination and support from Disability Services Offices across the country and for more timely delivery of accessible media. To anticipate those trends, we conduct research at AMAC on the evolution of accommodation requirements from a functional standpoint. It helps us to seek innovative, scalable, and affordable solutions for the hundreds of institutions of higher education that are served by AMAC. We hope that many more will join us to shape this unprecedented wave of opportunities for true lifelong inclusion for students with disabilities!

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<sup>1</sup> Carolyn P. Phillips, M.Ed., CPACC is the Interim Director of AMAC Accessibility at the College of Design of the Georgia Institute of Technology and Director of Tools for Life and the Pass It On Center



# 1. Digital Accessibility in U.S. Higher Education

## ADA and Section 504 of the American Rehabilitation Act

Institutions of Higher Education serving students in the United States have an obligation to ensure that every student can learn free from unlawful discrimination since the adoption of the Americans with Disabilities Act (ADA) of 1990, amended in 2008. The ADA guarantees equal opportunity for individuals with disabilities in public and private sector services and employment:

- Title II of the ADA prohibits all state and local governmental entities, including state universities, state and local community colleges, and university school systems, from discriminating against people with disabilities.
- Title III of the ADA prohibits private colleges and universities from discriminating against people with disabilities.

Section 504 of the Rehabilitation Act of 1973 prohibits “any program receiving federal financial assistance” from discriminating against a “qualified individual with a disability.” Thus, Section 504 covers any college or university that receives direct or indirect federal funding, including those accepting students who in turn receive financial aid from federal sources, including almost all colleges and universities.

While the ADA does not cover private colleges or universities controlled by religious organizations, these institutions will still be covered by Section 504 if they receive funding from any federal source. ADA and Section 504 also cover most professional, trade, vocational, and technical schools depending on whether their programs receive funding from state, local, private, or federal sources.

Section 504 prohibits discriminatory actions like denying a qualified individual with a disability admission because of her/his disability, excluding him/her from any course, course of study, or other part of its education program or activity because of her/his disability, or counseling him/her toward more restrictive career objectives as compared to other students.



Increasing numbers of students enter higher education using technology, knowing their rights, and understanding the accommodations they need.

“Compared to five years ago, increasing numbers of students enter higher education using technology, knowing their rights, and understanding the accommodations they need. With those convergent forces, many outcomes defined by disability legislation over the past few years are materializing at a rapid pace.” Carolyn Phillips, M.Ed., CPACC, Interim Director, AMAC Accessibility”

### Implications of ADA and Section 504 for digital contents and services

While digital accessibility was not a major area of concern when the ADA was initially adopted and implemented in the 1990s, the proliferation and increasing importance of digital contents, services, and communications in higher education, including web-based resources, electronic books, or courseware, and online learning tools, spawned an entirely new set of challenges for higher education institutions across the country. Digital Accessibility was further supported by the adoption of the Americans with Disabilities Act Amendments Act of 2008 and the 2008 Higher Education Opportunity Act.

Today, clear procedures are available to students to file complaints with the Office of Civil Rights of the Department of Education<sup>2</sup> (OCR), which is responsible for enforcing the civil rights of students. The OCR addresses an increasingly large number of complaints related to the lack of digital accessibility in higher education. When complaints cannot be resolved by OCR through a settlement agreement with a college or university, further enforcement steps may be taken which include substantial fines.

In summary, colleges and universities must provide students with disabilities reasonable accommodations in their practices, policies, and procedures and to provide auxiliary aids and services for persons with disabilities, “unless doing so would fundamentally alter the nature of the goods, services, facilities, privileges, advantages, and accommodations they offer, or would result in an undue financial or administrative burden on the institution.”

### Analyzing lawsuits, complaints, and settlements involving institutions of higher education

An exhaustive listing of lawsuits, complaints, and settlements by colleges and universities is available on a website of the University of Minnesota<sup>3</sup>. It allows institutions of higher education to get a complete view of the jurisprudence regarding the denial of reasonable accommodation or lack of accessibility of web resources or instructional material. It also allows the reader to analyze the different patterns and outcomes of cases initiated by advocacy organizations, students, the Department of Justice, or the Office of Civil Rights of the Department of Education. Cases cover online learning, e-books, reading devices, and a variety of accessibility service denials.

<sup>2</sup>. How the Office for Civil Rights Handles Complaints: <https://www2.ed.gov/about/offices/list/ocr/complaints-how.html?>

<sup>3</sup>. Higher Ed Accessibility Lawsuits, Complaints, and Settlements: <http://www.d.umn.edu/~lcarlson/atteam/lawsuits.html>

## 2. The New Wave of Campus Disability Demographics

### New student profiles: increased awareness and self-advocacy

According to the National Center for Education Statistics (Raue & Lewis, 2011), students with disabilities (SWD) attend postsecondary education at rates similar to their peers without disabilities; however, graduation rates from postsecondary educational settings for SWD are disparate from those of their counterparts without disabilities. Survey data from the National Longitudinal Transition Study - 2 (2011) indicated 89.9% of SWD articulated a goal to complete postsecondary education; but, only 40.7% achieved their goal. Changes in the way students access academic accommodations in postsecondary education pose additional challenges during the transition from secondary to postsecondary educational settings. More recent studies (e.g., Rowe et al. [2014] and Test et al. [2009]) identified self-advocacy as a predictor of success in postsecondary education. Janiga and Costenbader (2002) noted the need to teach self-advocacy skills to SWD before they matriculate to college so they are better able to access accommodations. The purpose of this study was to evaluate the effect of Self-Advocacy and Conflict Resolution (SACR) instruction on the ability of four college students with hidden disabilities (e.g., anxiety, attention deficit hyperactivity disorder, autism spectrum disorder, and depression) to request and negotiate academic accommodations in role-play and in-situ conditions. Results indicated a functional relation between SACR instruction and students' ability to negotiate accommodations in role-play situation and in students' ability to request accommodations in-situ. Social validity data indicated students and instructors felt the instruction was socially valid. Implications for practice and suggestions for future research are offered<sup>4</sup>.

### The impact of technology on a student's school life: braille



LaKeisha Holmes is a student at Georgia State University who is blind. She utilizes braille and e-text. "I was born with congenital glaucoma. I was diagnosed at three days old. Once they had a diagnosis they performed a surgery, I guess, to try to gain the vision that I lost. But as the time went on, my vision deteriorated... My disability affects me daily when it comes to writing. I have to do all of my work on the computer because my handwriting is really, really bad. I read braille or I read my books electronically. Assistive technology has had a huge impact on my life in terms of education. Before I went through assistive technology training, I had a really difficult time in school, and I wasn't doing great. But after I got the assistive technology training and learned how to use the technology that I needed to know in order to navigate things for school, I came back to school and I've been doing extremely well."

4. Source: Referred to by Debra G. Holzberg (2017) in The Effects of Self-Advocacy and Conflict Resolution Instruction on the Ability of College Students with Mild Disabilities to Request and Negotiate Academic Accommodations. Available at Self-Advocacy and Conflict Resolution Strategies...made easy!

Of all undergraduates for the academic year 2011-12, 11% reported having a disability for both males and females. Among those, 21% of undergraduates who were veterans reported having a disability. The percentage of undergraduates having a disability was higher among those age 30 and over (16%) than among 15- to 23-year-olds (9%) and 24- to 29-year-olds (11%). Students with disabilities are those who reported that they had one or more of the following conditions: a specific learning disability, a visual impairment, hard of hearing, deafness, a speech impairment, an orthopedic impairment, or a health impairment.<sup>5</sup>

### Enrollment trends and disability patterns

While not recent, the 2011 study by the National Center for Education Statistics “Students with Disabilities at Degree-Granting Postsecondary Institutions”<sup>6</sup> offers a reliable estimate of current demographics. It shows that during the 12-month 2008–09 academic year, 88% of 2-year and 4-year Title IV degree-granting postsecondary institutions reported enrolling students with disabilities. Almost all public 2-year and 4-year institutions (99%) and medium and large institutions (100%) reported enrolling students with disabilities.

Among students with disabilities enrolled, the spectrum of disabilities was as follows:

Disabilities Reported by Students	All Institutions
Difficulty hearing	4%
Difficulty seeing	3%
Difficulty speaking or language impairment	1%
Mobility limitation/orthopedic impairment	7%
Traumatic brain injury	2%
Specific learning disabilities	31%
ADD or ADHD	18%
Autism Spectrum Disorders	2%
Cognitive difficulties or intellectual disability	3%
Health impairment/condition, including chronic conditions	11%

5. SOURCE: U.S. Department of Education, National Center for Education Statistics. (2016). Digest of Education Statistics, 2015 (2016-014), Chapter 3.

6. SOURCE: 2011 study by the National Center for Education Statistics “Students with Disabilities at Degree-Granting Postsecondary Institutions”

## 3. Managing Digital Accessibility

### Multiple disabilities, many digital technologies

While traditional accommodation with assistive technologies for individual students and lecture type accessibility features are generally available among U.S. colleges and universities, ensuring that everything digital in the student learning experience and campus life is accessible as well remains one of the main challenges faced by administrators and faculty. Digital accessibility barriers affect students with vision, hearing, cognitive, and motor disabilities in multiple ways. Whether instructional materials are perceivable, understandable, and actionable may be affected by multiple factors in how the software and user interface are designed, and how the content is edited, or which device is used. They also need to be compatible with assistive technologies. Screen readers for blind students are useless if the content is not properly edited and formatted for accessibility.

Students using alternative input-output devices may not be able to interact with a website or self-paced online course if their functions cannot be accessed without a mouse with keyboard functions only. Most faculty and staff who create digital content, unless specifically trained in accessibility, cannot anticipate or master many of those aspects. With hundreds of content creators on every campus, multiple content creation tools, and different types of media and devices, managing and maintaining accessibility can be a daunting task.

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“Discovering how to make ever-shifting information and communication technologies accessible is the primary challenge.”

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Sheryl Ballenger, Ph.D., CPACC, Manager of Captioning and Described Media Services at AMAC Accessibility

## Accommodation vs. Accessibility

### An accommodation is:

- Unique to the needs of an individual based on their disability/disabilities.
- Often determined by an office of accommodations, human resources, or an assistive technology specialist assessment.
- In higher education this includes media remediation such as e-text or braille, interpretation (live or remote) such as American Sign Language (ASL), real-time captioning (live or remote), audio description, closed or option captioning in time-based media, transcripts, and other forms of accessible media.
- A reactive process to provide for inaccessible content, environments, and for situations that were not anticipated.

### Accessibility is:

- Proactive responsibility of all who create or publish digital content.
- Made available to everyone no matter how the content is delivered or received.
- Does not require the end-user to provide documentation of a disability.
- Should be expected in design, creation, and delivery of content in higher education, including learning management systems, applications, and websites.
- Includes meeting WCAG 2.0 AA in the United States as part of the published 508 Refresh in 2018.

## Challenges of online learning accessibility and organizational disconnects

Online enrollment of courses as a percentage of total enrollment in higher education rose from 9.6% in 2002 to 32% in 2012. As of 2012, 94.5% of higher education institutions have some form of online offering for students, with 62.4% offering fully online programs in addition to individual courses. Traditionally, accessibility for students with disabilities to online learning has not been considered a priority, and most faculty members are unaware of best practices for accessibility when teaching in this medium. Offices of Disability Services (ODS) and Centers for Teaching and Learning (CTL) within higher education institutions must play a key role in working collaboratively to find ways to ensure that all online courses are accessible to the wide range of diverse learners attending higher education institutions. Research shows that only 37% of ODSs and/or CTLs are working together to offer faculty trainings or resources specific to ensuring that online courses are accessible.

For Janet Sylvia, Coordinator and Accessibility Specialist at AMAC's Web Accessibility Group (WAG) for Higher Education, "Institutions of higher education are a distributed environment, often with 10-20 different colleges and schools. One unit may have an active Information and Communication Technology (ICT) accessibility policy and team, while another has nothing. This inconsistency is best resolved by top-level administrative buy-in across the institution as a whole."

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"Where I've worked from is to always have the end user in mind. This is of the utmost importance for what we do and it continues to drive a lot of the individuals who work here."

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Guy Toles, Braille Services Manager, AMAC Accessibility



### The impact of innovation on accessibility

New technology keeps transforming the ways instruction is delivered. Sheryl Ballenger, Ph.D., CPACC, Captioned & Described Media Services Manager at AMAC observes: “Acceptance and willingness to create digital/ICT accessibility is not a challenge in post-secondary institutions. Every institutional representative I have met sincerely wants to create and offer access. They understand and promote that access is integral to learning. The greatest challenge is staying current on technology evolutions. The continuously changing educational technology landscape usually requires new methods of incorporating accessibility. An institution may be successfully providing accessible course lectures on campus, but now they must move that course online within a short timeframe. Discovering how to make ever-shifting information and communication technologies accessible is the primary challenge. For online learning, accessibility must be the first element of course design; the next is to produce all other course elements with access in mind.”

“We’re very proud to be active with AMAC. The work this organization is doing is absolutely essential.”

David Anderson, JD Executive Director, Higher Education Association for American Publishers

### Making instructional contents accessible to all students

One additional area of utmost importance for all institutions of higher education is the unrestricted access of all students with various forms of print disabilities to accessible instructional material: textbooks, courseware, presentations, etc. And while accessibility features are well documented, implementing adequate processes to make those systematically available to all students in multiple optional formats is a difficult and costly endeavor. Disability demographics in higher education show a great variety of students’ challenges, which implies a large variety of content delivery formats: different types of electronic files, braille books, audio books, with a particular challenge when it comes to scientific or technical courseware or textbooks or contents relying extensively on graphic information.

Adding to the technical complexities of file editing and processing, the need for college and universities to operate in the context of copyright laws requires adequate legal and administrative procedures. Often colleges and universities are reluctant to operate in the context of what they perceive as a still uncertain legal framework.

### Managing copyrights under the Chafee Amendment

In 1996, the Chafee Amendment (Section 121) amended the U.S. Copyright Act to create a copyright exception for persons who are blind or print disabled. Section 121 allows authorized entities, “whose primary mission is to provide specialized services relating to training, education, adaptive reading, or information access needs of blind or other persons with disabilities,” to convert published works to an accessible format. The loose definition of “authorized entity” creates an uncertainty among institutions of higher education whether and how they can rely on the protection of the Chafee Amendment. Publishers’ position is that only “trusted intermediaries” i.e. institutions who specialize in promoting accessibility, not educational institutions in general, qualify as authorized entities.

# Services delivered by colleges and universities for accessibility of educational materials and services <sup>7</sup>

Percent of 2-year and 4-year degree-granting postsecondary institutions enrolling students with disabilities that provided various services or accommodations to students with disabilities, by institutional characteristics: 2008-09

Size of Institutions	Large print or Braille materials	Alternative exam formats	Real-time captioning	Career or placement services for students with disabilities
All institutions	51	71	70	26
Less than 3,000	33	56	54	18
3,000 to 9,999	74	92	93	34
10,000 or more	92	98	98	48

7. SOURCE: 2011 study by the National Center for Education Statistics "Students with Disabilities at Degree-Granting Postsecondary Institutions"



### The benefits of scale

As the table above shows, larger institutions of higher education offer accessible services to a greater extent than smaller institutions. A key factor influencing this pattern is the complexity of planning, procuring, delivering, and monitoring accessibility services in-house. In addition, the smaller an institution, the less frequent specific types of alternative accessible formats may be requested, requiring “re-inventing the wheel” for each occurrence. Even among larger institutions, decentralized operations often present similar challenges.

Multiple benefits of shared digital accessibility services:

- Substantial economies of scale through the sharing of expensive systems and production tools such as braille embossers. Better rates of utilization and returns on investment in equipment, systems, and software.
- Ability to maintain qualified staff for a wide variety of types of disabilities, accommodations, and editing and production of alternative accessible formats including, when necessary, technical terms and syntax knowledge (i.e. mathematics, chemistry, physics, law, etc.).
- Instant availability of existing accessible electronic versions of textbooks most used across U.S. colleges and universities since these have already been produced for other universities - essentially benefitting from the scale of serving a user population of several hundreds of thousands nationwide.
- Single interface with publishers through a “Trusted Intermediary” with no legal work regarding copyrights exceptions.
- On demand services with the potential to automate most workflows online.
- Achieving greater quality and predictability for less cost.

## 4. The AMAC Case Study


AMAC started from a college dorm at the University of Georgia in 2006 as a student-led initiative to make alternative formats available, and grew organically with the support of the University System of Georgia Board of Regents. AMAC moved to the Enterprise Innovation Institute at Georgia Institute of Technology in Atlanta, GA in 2010. AMAC became a research unit of the College of Design at Georgia Institute of Technology in 2012. AMAC has become a one-stop shop for a full range of digital accessibility services and training for universities, government, corporations, and non-profit organizations. AMAC is the leading U.S. entity helping higher education institutions meet their Section 504 compliance obligations by providing tailored, timely, and efficient academic accommodations and services (braille, accessible electronic text, captioning, audio-description of videos, and accommodation data tracking and reporting for students with disabilities and the institutions they attend).



AMAC's headquarters in Atlanta

### AMAC in Numbers

**45,000**   
FILES AVAILABLE WITH  
**ACCESSTEXT  
NETWORK**

**230,000**  
**PAGES**   
OF BRAILLE  
PRODUCED

 **CREATORS OF  
THE FIRST**  
MASSIVE OPEN ONLINE COURSE  
OF ITS KIND IN ICT ACCESSIBILITY

 **124,000**  
POWERPOINT SLIDES  
CONVERTED TO ACCESSIBLE FORMATS

 **SERVING OUR  
CUSTOMERS IN  
42 STATES**

“AMAC is unique and fulfills accommodations and accessibility training with an economy of scale that few institutions can replicate.”

Valorie Sundby, CPWA, PCWA

## AMAC Services

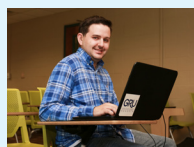
### Custom Accessibility Solutions

- **Media Production:** AMAC's in-house production teams produce accessible media that is quality assured for accuracy.  
Captioning and Described Media: AMAC's team of realtime and post-production captioning and audio description experts makes videos and realtime events accessible.
- **Technical Support:** determining what a person needs, how to place an AMAC order, how to access files, or how to utilize assistive technology available in the AMAC Student Center.

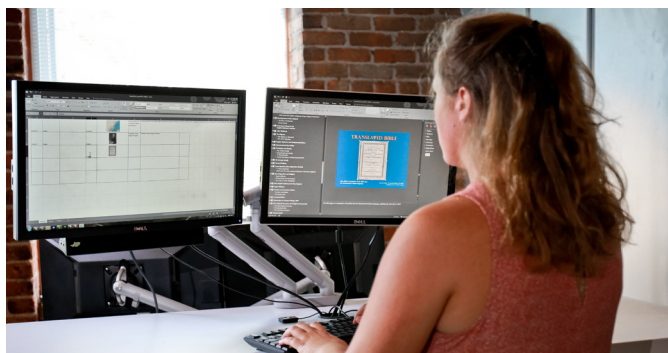
### Management Resources

- **Accommodation Management:** The Student Accommodation Manager (SAM) web-app is designed to help college disability offices securely manage accommodations and data for their students including case notes, custom accommodation letters, etc.
- **ICT Compliance and Training:** With legal mandates and the increasing growth of the internet, AMAC addresses the requirements for Section 508 and WCAG 2.0 compliance while meeting the needs of individuals with disabilities.

### The impact of technology in a student's school life: real time captioning



Drew Rogers is a student at Augusta University with a hearing impairment. He utilizes real-time remote captioning from AMAC: “I had never thought that real-time captioning was possible. It has helped me greatly, and I couldn't imagine a world without it. Once I get the notes from AMAC, I will print the whole thing out and then I will try to just highlight important information that the professor says. That's helped me a lot so far. Real-time captioning is pretty much the biggest reason why I have a 4.0 right now compared to what I had in high school. The solutions are like seeing the future. I don't have to rely on other people, family members, friends, or teachers, or anything - just being able to get there myself.”



Working on e-Text



The Tools for Life Lab at AMAC

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The services AMAC provides and the ways we can partner together have allowed us to really accelerate in our efforts to take our own resources and make sure they're accessible."

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Tacy Quinn, Associate Director for Digital Media at W. W. Norton & Company

#### On demand production services

- AMAC Library: AMAC's digital archive contains thousands of textbooks converted into accessible formats by its team of experts, many already produced in multiple accessible formats and ready for re-use. AMAC college and university customers can place orders for titles, which can be fulfilled in 24-48 hours.
- 90% of all postsecondary textbook titles are provided through one authorization and one standard request process
- Accessible Material Producers: High quality accessible material production of e-text, audio, braille, captioning and audio-description.

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If you need braille, check and see if they have the material already available in their library of books they have already transcribed.

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Grady Landrum, Director of Disability Services, Wichita State University

#### The inner workings of AMAC as "Trusted Intermediary" with publishers

AMAC and its AccessText Network (ATN) are able to bridge the gap between universities and publishers. AMAC processes take into account publishers' needs and concerns regarding copyright and appropriate distribution of content to colleges and universities. All AMAC customers attest to meeting ADA legal requirements for accommodations. AMAC has partnered with leading educational publishers to create agreements between the universities and publishers that address these concerns and at the same time provide efficient and enhanced services to college and universities. AMAC and ATN together serve well over 3,000 institutions of higher education in an efficient and effective process, saving time and resources for students with disabilities, the offices in higher education that serve these students, and its publishing industry partners.

Grady Landrum, Director of Disability Services, Wichita State University explains: “We’ve used AMAC Services for Braille. For us it came at a valuable time, where we had a brand new student who was blind in pre-med. We only had a few months’ notice to get a physics book embossed and a chemistry book in braille. We needed the raised graphics done from the book. We were able to setup a timeline of delivery so that we got everything two weeks before everything was needed in class. This helped the student stay up to speed in the class with everything she needed. AMAC is a valuable resource.”

For Janice Brown, Director of Services for Students with Disabilities, California State University, Fresno: “We started using AMAC’s Student Accommodation Management system in 2008. At that time, everything in our program was haphazard and in multiple different resources; we were using Excel and Access and really every staff member used a different product and stored data in a different way. Trying to put together a report for audit purposes was really a multi-week task. Now we use the Student Accommodation Manager for everything; every aspect of a disability service program is very detailed, whether it’s tracking your student data or the different services tracked and how we use those services.”

### The AMAC business model

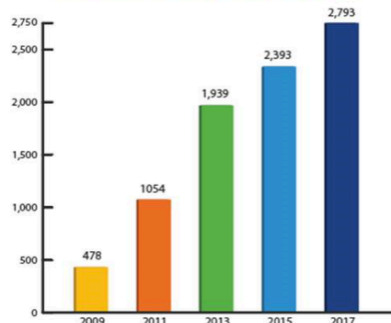
The AMAC business model relies on a set of fees for on-demand services. The AMAC accessibility services are offered to institutions of higher education who choose to partner with AMAC. Customers have a choice of two membership levels, each designed to meet the accessibility needs of different types of organizations with various levels of services. This model allows AMAC to create economies of scale to the benefit of their customers who can minimize their fixed costs and buy services as needed.

### Harmonizing services with student needs and learning modalities

The services offered by AMAC are focused on student needs and learning modalities by helping universities provide tailored accessible instructional materials. The hundreds of colleges and universities served by AMAC benefit from an automated, streamlined ordering structure for material production, including the AMAC Student Center, which provides secure access to individualized textbooks and assistive technology.

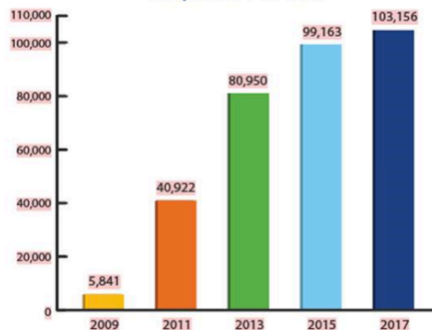
#### Access Text Network Members per year

Total Postsecondary Members by Year



#### Access Text Network requests for publisher files per year

Requests Per Year



### Facts speak for themselves

Each time one of those more than 100,000 ATN files a year is downloaded, a student with print related disabilities gets full access to an otherwise inaccessible essential textbook for his or her studies. This is truly life changing for those students and solves a major issue for colleges and universities that do not have the in-house capabilities to produce quality accessible versions of mainstream educational materials. Recognizing those considerable benefits, as of 2017, more than half of the degree granting institutions of higher education in the United States had joined the Access Text Network.

### The impact of technology on a student's school life: assistive software



Harley Chesney is enrolled in undergraduate studies at Gordon State College, and is currently pursuing Master's Degree at Georgia Institute of Technology. Harley has a Reading Processing Disorder and utilizes

software from the AMAC Student Download Center to succeed in college. "The first time I ever used assistive technology during an exam at Gordon, I remember getting done with the exam and walking outside—I had finished at the same time everyone else had finished, which is the first time I had ever experienced that! One of the programs that's helped me a lot is ClaroRead. I use it for reading documents. I can just select a block of text and it will read the document to me, which is really, really helpful.

"The electronic textbooks are some of my favorite services that AMAC provides. I am able to use PDF reader, so if I have the digital copy of the textbook I can use it to have it read the textbook to me. It's helpful and it saves me a lot of time. Each chapter is bookmarked, so you can go and select which chapter you want and go. Another cool thing is you can select blocks of text and then have it saved as an audio file. That way, if you want to read a particular chapter on your way to school in the car or something and play it over your speakers, you can just save it as an MP3 and then download it to your phone."



### Operational benefits of shared resources

Valorie Sundby, CPWA, PCWA, Former Digital Accessibility Engineer at AMAC: "Skills required include document remediation, captioning, video description, and braille embossing. Some of these

skills require ongoing training and practice to remain at a high level and are difficult to attain and maintain when the volume of production is low. Smaller schools who invest in capital equipment such as a braille embosser may see that equipment sits idle for months or years. Keeping staff trained to work this equipment is difficult to sustain. Many smaller institutions will send staff for training in a wide variety of accessibility remediation skills. Those skills then atrophy as they go unused until the next student with that accommodation is enrolled. Larger institutions often build scaled down versions of AMAC that provide the same resources for their institution only. Some collaboration and sharing of resources may occur within a college or university system to meet an economy of scale that AMAC has attained. Typically, there are gaps that remain in the institutional services and resources for accessibility and accommodation. Regardless of size, post-secondary institutions have relied on outside resources to fill some of their accessibility and accommodation needs. There are very few instances where a single institution or system can meet the economy of scale to maintain highly trained staff and capital equipment to provide high-quality, timely accessibility services."

### In addition, AMAC customers call on the AMAC team to:

- Provide assistive technology applications that match the needs of students and file types requested to optimize results.
- Offer virtual training and hands-on customer support.
- Assist with guidance, training, and tools for ICT Accessibility Adoption Plans.
- Help campus disability service providers run their day-to-day process of providing accommodations to students with disabilities and to organize and manage data on students' disabilities, accommodations provided, accommodation letters, confidential case notes, etc. in one central location through the Student Accommodation Manager (SAM), a secure web-based solution.





### Why Expert Quality Service Matters to Students

Colleges and universities deal with a wide range of disabilities among their student body and the variety and sophistication of technologies available for accommodation and accessibility, the required technical expertise and attention to details in the production process is critical to the end-user. In addition, the conversion of files for students with print disabilities often requires in-depth knowledge of the subject matter to allow for proper transcription or description.

John Bui, Chemistry Topic Specialist at AMAC: “It is difficult for visually impaired students to learn chemistry without proper descriptions. Guys fall behind without this kind of stuff. So I’m always happy to work on this for students. We have to go into great detail when writing alt text for chemistry. For instance, students need to understand the representation of atoms or elements—what’s on the picture, what’s in a diagram—so they can follow along in class and study for tests or quizzes. Context is an important part of it. For instance, for a chemical reaction or equation, you want to make sure it’s appropriately described. Arrows going to the left and right means a reversible equilibrium equation. Just make sure you list those out. So we always need to make sure that the context is right for the student. It’s a great deal more intensive than just reading the symbols without understanding the subject matter.”



*Braille Transcription requires subject matter knowledge*

The relationship between my team and AMAC has given us such peace of mind. It is a level of access that we want our students to have, AMAC delivers time and time again... We definitely rely on Audio Description. We have such great feedback and responses from students who really appreciate the efforts in ensuring that everything that is on the video is described and available to them. We get a lot of positive feedback in that regard.



Quality of services also implies communicating and working with Disability Service Providers (DSPs) to help them understand and assess the level of attention required for the service to be effective and the necessary timeline to deliver. Braille transcription and printing, for instance, is complex, and coordinating with DSPs is extremely important.

Guy Toles, Braille Services Manager at AMAC: “We had a disability service provider from a university contact us who had no or very little exposure to braille or students who are blind or visually impaired. I thought a lot about being in their shoes and what I would be facing considering all of the advanced services and subjects the student would need from freshman year on was mind boggling. We worked with them all four years and that student graduated at the top of their class. The disability service provider sent me a video of their final teaching project that the student lead; it was impressive.

The materials we converted and the concepts being portrayed required that our team not only be certified in that particular type of braille and experienced in the subject matter, but also to consider different points of view and creativity beyond a traditional transcription project. All of this to ensure that the information the student needed was being portrayed correctly.”

“AMAC is a very passionate place and it’s very easy to follow your conscience in our work. Everybody who works at AMAC understands who we ultimately serve, and that is students with disabilities. You know that individuals at colleges and universities, companies, nonprofits, and government agencies are reading our materials. And yes, a lot of times someone else might be purchasing the materials. But where I’ve always worked from is to have the end user in mind. This is of the utmost importance for what we do and it continues to drive a lot of the individuals who work here at AMAC.”





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“AMAC is a very passionate place and it’s very easy to follow your conscience day in and day out. Everybody who works at AMAC understands who we ultimately serve, and that is students with disabilities.”

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and Communication Technologies

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