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Introduction

**Digital media and accessibility:** Digital media are a tremendous asset for students, faculty, and staff, providing a level of resources, independence and learning that was not previously available. At Northern Essex Community College, we are proud of our varied use of technology to enhance all opportunities we offer to the college community. However, not all community members can benefit or access our digital materials. In fact, the majority of digital media at NECC are not accessible to students or community members with disabilities, even though there are agreed-upon accessible media design standards being used in the world all around us.

**Moving towards compliance:** The members of the process management group for Accessible Media Vision and Guidelines will unveil a plan to guide the process through system-wide commitment, effort, continued resources and support. We recommend the inclusion of this work as part of our institution’s strategic initiatives. This document and the plans we will propose draw on the accessible design standards already published and best practices in the field today.

It’s the right thing to do! Creating an institutional Accessible Media Vision and recommending technical guidelines will serve as the catalyst for a systematic approach that promotes a culture of inclusion and diversity.

**What you will learn:** In this proposal, we will outline the current trends in disability law, the accessibility issues that individuals with disabilities encounter, a vision and a standard for technical guidelines that NECC can use, and the resources needed to begin to move towards compliance.

Institution-wide media accessibility is best attained and sustained when there is leadership to support a vision and commitment toward accessibility. Please consider these recommendations.
Executive Summary Recommendations

☐ **Adopt: A Statement of our Institutional Vision on Accessible Media**

A formal stand-alone statement of the institution’s vision or commitment to media accessibility is published and made readily available. Based on research and by viewing various types of accessibly policies, a formal stand-alone policy is the best predictor of promoting accessibility. Those with a vested interest in the institution know the vision and commitment to and legal responsibility regarding media accessibility. Relevant stakeholders are made aware of their responsibilities under this vision. This may take the form of a letter, email, or memo from the responsible source, such as the Board of Trustees or the Office of the President. This should also be posted on the NECC web site (see Appendix 1: NECC Accessible Media Vision and Guidelines).

☐ **Use: Technical Guidelines on Media Accessibility as a Resource**

The resources for technical guidelines that we are recommending are based on current agreed upon design and technical guidelines for accessibility (see Appendix 1a: Sample of Web Accessibility Standards).

☐ **Form: Strategic Goal 6 – Develop College-wide Accessible Media Standards**

This new strategic goal will be committed to the institutional vision of accessible media, charged with developing policy, systematic college-wide procedures, accountability measures, training plans, audits, and considerations of campus compliance. This team will prepare reports to the college on compliance with technical guidelines, needs for the current year, and concerns (see Appendix 2: Strategic Goal 6 for Accessible Media-Priority Worksheet).
Media Definition

Team members were asked to submit their definitions of media. A Wordle was created from that information which helped the team to develop a common focal point and illustrate the scope of the project.
What is Media Accessibility?

Media accessibility is the practice of creating media that are usable by people of all abilities and disabilities. Web accessibility is increasingly important as we live more and more of our lives online. Even with assistive technology, disabled users often hit roadblocks that prevent comprehension of educational content due to poor design and technical incompatibilities. Institutions of higher education have a responsibility to review digital resources and ensure accessibility for their students, faculty, and staff.

What are the Accessibility Issues?

The range of disabilities that can be impacted by media design is tremendous. While the most common category is blindness or low-vision and deafness or being hard of hearing, there is a wide range of potential issues for persons with sensory, physical or cognitive disabilities. Medical conditions that may not constitute a disability may also affect accessibility, including injury-related and age-related conditions, which may be temporary or chronic.

People who are blind

To access media, many individuals who are blind rely on screen readers – software that reads text on the screen and outputs this information to a speech synthesizer or refreshable Braille display. They may use rapid navigation strategies such as tabbing through the headings or links on web pages rather than reading every word on the page in sequence. Examples of barriers that people with blindness may encounter include:

- Images that do not have alternative text
- Complex images (e.g., graphs or charts) that are not adequately described
- Video that is not described in text or audio
- Tables that do not make sense when read serially (in a cell-by-cell or "linearized" mode)
- Forms that cannot be tabbed through in a logical sequence or that are poorly labeled
- Browsers and authoring tools that lack keyboard support for all commands
- Color that is used as a unique marker to emphasize text on a Web site (Demarcated text should be offset with other or additional demarcation-like symbols - for example, “items in green below and also denoted with asterisks (*) are required.”)
- Non-standard document formats that may be difficult for a screen reader to interpret

People who have partial or low vision

Particularly with the growing population of individuals over 50, issues with fading eyesight are becoming more and more important. To use media, some people with low vision use extra-large monitors and increase the size of system fonts and images. Others use screen magnifiers or screen enhancement software. Barriers that people with partial or low vision may encounter include:

- Web pages with absolute font sizes that do not change (enlarge or reduce) easily
- Web pages that, because of inconsistent layout, are difficult to navigate when enlarged, due to loss of surrounding context
- Web pages, or images on Web pages, that have poor contrast, and whose contrast cannot be easily changed through user override of author style sheets
- Text presented as images, which prevents wrapping to the next line when enlarged

People who have color blindness or color deficiency

Color blindness is a lack of sensitivity to certain colors. Common forms of color blindness include difficulty distinguishing between red and green or between yellow and blue. To use the Web, some people with color blindness use their own style sheets to override the font and background color choices of the author. Barriers that people with color blindness or color deficiency may encounter include:
• Color that is used as a unique marker to emphasize text (should be offset with other or additional demarcation like symbols (for example, “items in green below and also denoted with asterisks (*) are required.”)
• Text that inadequately contrasts with background color or patterns
• Browsers that do not support user override of authors’ style sheets

People who are deaf or hard of hearing
Many people who are deaf rely on captions for audio content. They may need to turn on the captions on an audio file as they browse a page; concentrate harder to read what is on a page; or rely on supplemental images to highlight context. Barriers that people who are deaf or hard of hearing may encounter include:

• Lack of captions or transcripts of audio in videos and on the Web, including Webcasts

People who have mobility disabilities
People with mobility disabilities affecting the hands or arms may use a specialized mouse; a keyboard with a layout of keys that matches their range of hand motion; a pointing device such as a head-mouse, head-pointer or mouth-stick; voice-recognition software; or other assistive technologies to access and interact with the information. Barriers that people with motor disabilities affecting the hands or arms may encounter include:

• Time-limited response options
• Browsers and authoring tools that do not support keyboard alternatives for mouse commands
• Forms that cannot be tabbed through in a logical order

People who have learning and cognitive disabilities
Individuals with learning and cognitive disabilities may have difficulty processing language or numbers, may be easily distracted, or may be unable to remember or focus on large amounts of information. They may need to turn off animations on a site in order to be able to focus on the site’s content. Barriers that people with learning disabilities may encounter include:

• Distracting visual or audio elements that cannot easily be turned off
• Lack of clear and consistent organization
• Time-limited response options

People who have seizure disorders
Some individuals with seizure disorders may need to turn off animations, blinking text, or certain frequencies of audio. Avoidance of these visual or audio frequencies helps prevent triggering of seizures. Barriers that people with seizure disorders may encounter include:

• Use of visual or audio frequencies that can trigger seizures (e.g., rapidly blinking text)
What Is Our Legal Obligation?

Background on Media Accessibility and Shifting Legal Analysis

The Internet plays an integral role in the delivery of postsecondary academic content as well as student and administrative services. However, many digital materials are not designed in such a way to be accessible to some individuals who have disabilities, including those who are blind and using assistive technologies such as screen readers or Braille displays.

Federal laws have previously focused on “program access.” Until recently, accommodations relating to accessibility of media were made on an individual basis by college disabilities offices. This model is considered a “retrofitting” model.

In the last few years, there has been a legal shift from making accommodations with digital materials to proactively designing media in an accessible format. The Department of Education, Office for Civil Rights is saying “retro-fitting is no longer acceptable.” A Dear Colleague Letter from the Department of Education was sent to all college and university presidents strongly encouraging presidents to plan proactively as an institution, for media or technology accessibility compliance. The focus of the Dear Colleague letter was that planning needs to be institution wide and must start immediately. There is a shift in the legal landscape regarding media accessibility. Below is a two point legal analysis of how laws are being shaped and applied today:

Institutions Should Be Asking This Question

“Does the means of accessing a program via web or other information technology afford people with disabilities the same level of access as those without disabilities?”

<table>
<thead>
<tr>
<th>Analysis Point 1. Founded on fairness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Videos without captions for individuals who are deaf, but currently technology exists to add or design videos with captions.</td>
</tr>
<tr>
<td>*Analysis: We need to do this proactively; otherwise, this is not fair.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analysis Point 2. Agreed upon design standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: The online application for admission is not designed to be accessible to screen readers used by individuals that are blind. Current technology exists to accessibly design materials proactively so they work with screen reading software.</td>
</tr>
<tr>
<td>* Analysis: Accessible design standards do exist; therefore, we need to use them.</td>
</tr>
</tbody>
</table>
Relevant Disability Laws
For many years federal legislation (e.g., Section 504 of the Rehabilitation Act of 1973, The Americans with Disabilities Act (ADA) of 1990 and 2008 Amendments) has mandated that an institution’s programs and services be accessible to qualified individuals with disabilities. However, many institutions have not addressed media accessibility as aggressively as they have addressed the physical accessibility of their campuses.

Americans with Disabilities Act Amendments Act (ADA AA)
This act is a wide-ranging law intended to make American society more accessible to people with disabilities. It prohibits discrimination against people with disabilities in employment, transportation, public accommodation, communications, and governmental activities.

Definition of qualified individual with a disability: An individual with a disability who, with or without reasonable modification to rules, policies, or practices, the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipt of services or the participation in programs or activities provided by a public entity.

Section 504 of the Rehabilitation Act of 1973
Section 504 is aimed at making educational programs and facilities accessible to all students. This act prohibits discrimination on the basis of disability which applies to any program that receives federal financial support.

Section 508 of the Rehabilitation Act
Section 508 of the Rehabilitation Act requires that most information technology (IT) that federal agencies procure, develop, maintain, and use be accessible to people with disabilities, both employees and members of the public. The web standards are based in part on the Web Content Accessibility Guidelines 1.0 (WCAG), developed by the World Wide Web Consortium (W3C). In 2008, the W3C updated its standards to WCAG 2.0, and in 2011 the Access Board issued a second draft of updated accessibility standards for Section 508 (Access Board, 2011). There is legislation that requires federal agencies to develop, procure, and use accessible electronic and information technology.
What Is Going On Locally?
After we contacted several community colleges in Massachusetts and New Hampshire, it became clear that there is no consensus on policy and procedure regarding accessible media. Many of the sister community colleges we surveyed did not have an accessible media policy. All institutions we contacted are struggling with this same issue. Some examples of what we learned follow:

- Most community colleges have clearly defined services available for students with disabilities such as assistive technology labs and tools, screen readers, and alternate format materials for students. One institution has a link on its website to the Web Accessibility Initiative, which is a group dedicated to developing guidelines for web accessibility.
- One institution does provide a link to universal design on the Disability Support Services website that discusses elements of universal design and provides presentations and tutorials for faculty to utilize.
- Another college has developed a LibGuide on the subject of universal design and provides information for faculty and staff to utilize in the classroom. The information includes an example of a website that is inaccessible and the same website after being retrofitted for accessibility. There are also documents describing how to develop PDF files that are accessible. The guide provides instructions for adapting distance education courses so that they are accessible courses as well as providing strategies for all learners.
- Another college has links to accessibility tutorials for documents in Microsoft Office 2010 and also demos of accessibility in Windows 7.

There was interest from most responders in learning the results of this process management project, who requested to be informed when the project was completed.

What Is Going On Nationally?
Some of the larger four year Institutions in the country have developed accessibility policies and procedures; however, there is no clear evidence that compliance is being met even when a policy exists.

Research on Accessibility Policies
In the study below, researchers conducted a comprehensive semi-automated web search for web or IT accessibility policies in all higher education institutions in the United States. An excerpt from the study below:

“Postsecondary schools have responded in a range of ways to the problem of web accessibility. Some have made no effort in this regard; some individual campus units have made significant efforts; some schools are working for accessibility systematically and campus-wide. Some campuses provide accessibility guidance online for their campus communities (e.g., University of Washington, n.d.). Some schools provide specialized training on web accessibility to faculty and staff who design web pages. Some have licensed tools that monitor web accessibility throughout the institution and provide feedback to site owners.

Increasingly, campuses are adopting policies that specifically address web accessibility. Some institutional policies broadly encompass all IT, not just websites. Thompson, Draffan, & Patel (2009) conducted a survey in which 149 individual self-selected representatives from 106 higher education institutions responded to questions related to their technology accessibility efforts. Of these, 55% reported having a documented policy regarding web accessibility, and 46% reported having policies and/or procedures that require consideration of accessibility when acquiring IT. Bradbard, Peters, & Caneva (2010) reported that fifty of the fifty-eight original land grant institutions (86%) have web accessibility policies. However, they also found that the majority of these policies had what they consider to be serious deficiencies such as failing to clearly define who the policy covers; articulate definitions and information that clarifies what is meant by web accessibility; and provide implementation timelines, enforcement mechanisms, and consequences for noncompliance.
Policies were classified into the following four types:

- **Formal-standalone** – a formal policy that specifically addresses web or technology accessibility
- **Formal-incorporated** – a formal web or technology policy that includes accessibility along with other issues such as use of templates, logos, privacy, and security
- **Standards or guidelines** – a set of techniques or recommended practices, with no expressly stated requirement that they be followed
- **General statement** – a general statement in support of web accessibility, including an institution’s commitment, but without the implementation details of a formal policy.

Analysis showed that compared to other types of policies, **formal-standalone policies are related to greater use of accessibility features overall**.

Figure 3. Accessibility ratings by type of accessibility policy

http://itd.athenpro.org/volume13/number1/thompson.html

What is NECC Doing Right?

The following pages will show some of the current efforts of NECC departments related to compliance with media accessibility. Since the beginning of this project over a year ago, discussions and initiatives regarding accessible media are making their way into planning, committee discussions, and dialogue here at NECC, but this is only the tip of the iceberg!

Center for Instructional Technology and Distance Learning

Since its inception in 1995, the Center for Instructional Technology has been committed to supporting pedagogy and enhancing learning by assisting faculty in the integration of academic technology into the curriculum. The collaboration between the faculty and staff continues to be the foundation for the development of quality instruction and curriculum design with the goal to challenge students to reach their highest potential. One component of CIT’s services is the design and development of workshops that support effective instructional deliveries. While we work and provide expertise on several aspects of academic technology, those directly related to accessibility appear below.

iTeach, CIT’s flagship offering, is a ten-week online certification program that focuses on the application of instructional design principles and effective technology integration in online and hybrid courses. As part of the curriculum, faculty learn the various ways to make or select ADA compliant course materials, implement alternative methods of materials delivery in a course and discuss the challenges students could face in a course that is not ADA compliant. The accessibility and usability unit offered through iTeach is also made available as a stand-alone module for anyone to access through the Blackboard system.

Quality Matters is a nationally recognized, faculty-centered, peer review process designed to certify the quality of online and hybrid courses. As part of the review process, a rubric containing 8 general standards and 41 specific standards is used to evaluate the design of courses. CIT incorporates the QM rubric as part of the iTeach program and the faculty coaching process in an effort to improve the quality and access of online or web-based courses. This effort includes the application of QM general standard 8, which focuses on a commitment to accessibility for all students in a course.

Furthermore, the CIT staff participates in webinars, conferences, seminars, and workshops to stay abreast of emerging technologies, instructional technology initiatives and distance education regulations. This is an effort to comply and meet with government mandates, accreditation requirements and industry standards. In addition, we will continue to research and acquire the necessary technology to support the compliance efforts recommended by the process management team. An example of this is the acquisition of the Atomic Learning Assistive Technologies license, in order to provide access to an extensive library of video tutorials that demonstrate the use of these tools. In the future, CIT will formalize its collaboration with Learning Accommodations as part of its strategic plan to increase media accessibility awareness and compliance.
The chart below describes the current process used by the Center for Instructional Technology to make online course materials accessible.
Learning Accommodations Center Initiatives

The chart below illustrates the Current LA Center Process once a student self identifies and requests an accessible media accommodation.

| Accommodation Request                                      | • Student requests services.  
|                                                            | • Student attends a Request for Services Meeting in person, over the phone or via internet.  
|                                                            | • Student signs disclosure documents.  

| Accommodation Determination & Review                       | • LA Center develops on an Accommodation Plan based on supporting documentation.  
|                                                            | • LA Center reviews policies and procedures regarding accommodations and services.  
|                                                            | • LA Center reviews student and faculty rights and responsibilities  

| Accommodation Provision                                    | • Student provides faculty with Faculty letter and approved Accommodation Plan for traditional style courses; LA Center emails instructors Online Accommodation Plan  
|                                                            | • LA Center team  
|                                                            |   o Works with faculty/student and the Center for Instructional Technology regarding accessibility of materials  
|                                                            |   o Provides textbook in accessible format  
|                                                            |   o Provides training on assistive technology such as JAWS or Zoomtext  
|                                                            |   o Collaborates with Client Computing to install assistive technology in specific classrooms or labs  
|                                                            |   o Provides Assistive Technology Lab in SC105 available for student use  

The Learning Accommodations Center has also partnered with various other departments to discuss accessibility and test accessibility. It has

- Reviewed accessibility of the following with Jaws and Zoomtext software:
  - Online PDF version and online NECC Admissions application
  - MyNECC Portal
  - NECC Website
- Obtained the Voluntary Product Accessibility Template (VPAT) for new student email, Office 365.
- Provided faculty and staff awareness and accessibility training

The Learning Accommodation Center has representation on the new Information Technology Standing Committee helping to heighten awareness and develop a system to include accessibility recommendations and decisions. Its actions include requesting the Voluntary Product Accessibility Template (VPAT) from vendors and suggesting a new charge for the IT Standing Committee with regard to accessibility.

The Learning Accommodations Center took part in a sub-committee of the Dynamic Signage Process Management Group. LA Center staff prepared a report on the accessibility issues related to dynamic signage products, which was submitted and reviewed in the final report.
Information Technology Initiatives

Information Technology Client Services collaborates with the LA Center to systematize efforts regarding the provision of assistive technology services and software for students and visitors. IT Client Services

- Installs all adaptive technology software when requested by the Learning Accommodations Center in designated computer labs every semester in accordance with licensing agreement.
- Contacts Vendors (Freedom Scientific- JAWS and Ai Squared-Zoom Text) bi-annually to reset install codes for reuse in Academic Computer Labs after ghosting all academic computers in Haverhill, Lawrence, and Riverwalk campuses.
- Researches current and future adaptive technology software for compatibility with existing and future hardware upgrades, numerous adaptive technology software packages currently installed, and various operating systems.
- Recommends current adaptive technology software upgrades in accordance with changes in hardware or operating system versions for seamless operation of software and compatibility.
- Downloads updates for adaptive technology software, audio and/or video drivers as required.
- Contacts vendor technical support to gather immediate resolution of errors if information is not documented on vendor website.
- Attends off-campus workshops on assistive technology software as well as vendor training and software demonstrations in Learning Accommodations.

NOTE: The current liaison in IT Client Services also served as an academic advisor and adjunct faculty for computer science students with disabilities. Subsequently, she attended meetings with Learning Accommodations, Academic Advising, co-operative supervisors in IT Client Services, and the computer science chairperson to assist students in computer science courses at NECC.
Marketing Communications

One of Marketing Communications’ goals is to have all NECC online presences comply with federal and state accessibility guidelines (Section 508) within the scope of our available resources. Prior to the process management project for Accessible Media Visions and Guidelines, there were informal systems in place within Marketing Communications to maintain 508 compliance.

With the influence of this process management project, Marketing Communications has started a more formal approach to making Portable Document Format (PDF) files accessible and making sure the NECC website and web presences are 508 compliant; however, some efforts have been running into logistical issues.

One issue is that Marketing Communications is not the only group that contributes content to the NECC website. We train and monitor several dozen “decentralized editors” who add to and modify content on the NECC website. Skill levels and available time to contribute to web editing vary widely among editors, and many do not utilize best practices for web content or web accessibility. To meet state and federal standards, and to shift more of the workload to decentralized editors and away from Marketing Communications, the following actions are being taken:

- Creating online tools and documentation on creating ADA compliant webpages, as well as accessible PDFs.
- Posting a web accessibility statement on the website and linking to it from the standard footer: http://www.necc.mass.edu/web-accessibility-statement/
- Setting a priority list as to which PDFs, based on their audience, have priority for being made accessible
- Training decentralized editors on how to make a PDF accessible
- Notifying and educating departments on why accessible PDFs are necessary and steps that can be taken to reduce workload
- Running a w3c accessibility validator on a regular basis
- Posting documentation on how to create ADA compliant webpages, including alt tags, table headers, and other web design standards

Achieving 508 compliance is unrealistic with the current resources available, unless all non-accessible PDF files are removed from the NECC website. While Marketing Communications can make a good faith effort and prioritize critical documents, it is not feasible to expect complete compliance site-wide. This is due largely to the complexity of creating accessible PDFs. Modifying a PDF to be accessible, even by a skilled user, is a time-intensive task. A 2-page PDF with a table is a full-day job for a skilled user (~8 hours) and requires a copy of Acrobat Pro.

There are currently over 1000 PDF files on the NECC website, and over 2400 on the Faculty and Staff website. We also add and replace an estimated 20 PDFs each month to the main website. The estimate is that it would take 2000 person hours to make all existing PDFs on the NECC website accessible, plus an additional 40 person hours of work per month. It would take one person, working 40-hour weeks nonstop about 65 weeks, or about 1.3 years to get the NECC website fully compliant. There are some caveats to these estimates.

- Some PDFs on our site are already accessible
- Some PDFs on our site may be duplicates or contain out-of-date information, in which case they would be discarded
- Some PDFs cannot be made accessible as they are image scans and contain no textual information

Other Accessibility Initiatives
Library Resources

All of the videos in the NECC Films on Demand (FOD) subscription now have captioning and interactive transcripts are available. FOD is a web-based digital video library service that streams high-quality educational videos in dozens of subject areas. http://necc.mass.libguides.com/films
Conclusion

Accessibility can result in better education by addressing the learning needs of a diverse student body. Accessibility is also a good investment. It builds credibility, expands an institution’s customer base, and ensures that instructional technology is current and forward-leading. It is simply the right thing to do. Institutions have a legal and ethical duty to provide equal access to materials. Accessibility is prudent. Proactive institutions will avoid penalties for noncompliance. Accessibility is a retention tool. Students of all abilities and disabilities will benefit from accessibility efforts, which are part of an instructional design process called universal design.

Universal design refers to the idea of creating products and environments whose features are as usable as possible for the widest variety of people, regardless of their age, ability, or status. Accessible content doesn’t just benefit those with disabilities. For example, in the case of web video, captioned content benefits non-native English speakers and those who prefer to learn by both reading and hearing new terminology. In a sound-sensitive environment like a library, captioned video can be viewed without disturbing those nearby. Essentially, content is most useful when it’s available and digestible in whichever format a user might need, including audio, video, or text.

Use of media has been on the rise at NECC, partly in recognition of the fact that the majority of people are visual learners. Even though addressing accessibility compliance can be time-consuming and expensive, we want to encourage the continued use of rich educational media with the appropriate resources in place to move towards compliance. The ultimate goal is to offer materials in as many formats as possible, to meet a variety of abilities and learning styles. Incorporating universal design principles creates an inclusive learning environment that makes ethical, economic and legal sense in an open and public institution such as NECC.
Appendices
Appendix 1: NECC Accessible Media Vision and Guidelines

Proposed Accessible Media Vision for Northern Essex Community College

NECC embodies a long standing commitment to the fundamental academic principles of equity and accessibility by providing all students and staff with equitable access to the college’s programs, services, events, and activities. To this aim, we seek to promote an inclusive academic environment by incorporating design concepts that remove or reduce barriers while enhancing the experience for the broadest possible audience to both current and emerging technologies. As a core value of NECC, we are committed to creating an institutional climate that deepens our appreciation for diversity.

Legal Responsibility as it Relates to Accessible Media/Communication

Title II of the Americans with Disabilities Act Amendments Act (ADA) and Section 504 of the Rehabilitation Act of 1973 (“Section 504”) require that public universities provide qualified individuals with disabilities equal access to their programs, services, and activities unless doing so would fundamentally alter the nature of their programs, services, or activities or would impose an undue burden. People with disabilities cannot be excluded simply by the design of communication materials. Institutions are often unaware of their responsibility and the risk of civil litigation as it relates to accessible media. Public universities are required to provide effective communication to persons with disabilities.

- **Effective Communication**: The United States Department of Education, Office for Civil Rights (“OCR”) is responsible for enforcing Section 504 and the ADA with respect to complaints filed against public institutions of higher education. These laws require that public universities take appropriate steps to ensure that communications with persons with disabilities are “as effective” as communications with others. OCR has repeatedly held that the term “communication” in this context means the transfer of information, examples include; NECC website, course materials, blackboard materials etc.

- **Plan in advance, not just “retrofit”**: The OCR has opined on several occasions that a public entity violates its obligations under the ADA when it simply responds to individual requests for accommodation on an ad-hoc basis. A public entity has an affirmative duty to establish a comprehensive policy in compliance with ADA and 504 in advance of any request for auxiliary aids or services. A public entity violates its obligations under ADA by “Retrofitting” and proactive planning for compliance has been strongly recommended by regulatory agencies. On a practical level, accessibility experts have determined that it generally takes less time and is less costly to include accessibility as a design parameter from the start, rather than attempting to “retrofit” media after a complaint has been filed.

Accessibility results in Universal Design: Universally designing materials ultimately benefits the broader student population. For example; research shows that captions benefit a much broader audience, as it facilitates notetaking, enhances understanding and recall and provides access to auditory content when sound quality or environmental noise may create distractions.

Moving toward compliance: NECC policy and programs will be moving towards compliance with state and federal regulatory laws. Training and timeframes for achieving compliance will be further developed and systematized in the newly created Strategic Goal #6- Develop College-wide Accessible Media Standards.

Technical Guidelines Resources and Training

Northern Essex Community College relies on administrators, faculty and staff to provide equal access to all programs and activities for individuals with disabilities. Resources, guidelines and training will be made available to all units, departments, administrators, faculty and staff to utilize media products in adherence with the following guidelines:

- **Commonwealth of Massachusetts Information Technology Division, Enterprise Web Accessibility Standards**
  - [http://www.mass.gov/anf/docs/itd/policies-standards/web-access-std.pdf](http://www.mass.gov/anf/docs/itd/policies-standards/web-access-std.pdf)

- **World Wide Web Consortium’s (W3C) Web Content Accessibility Guidelines (WCAG) 1.0**
  - [http://www.w3.org/TR/WAI-WEBCONTENT](http://www.w3.org/TR/WAI-WEBCONTENT) (see appendix 4a for samples of technical guidelines)
Exemptions

NECC will have a systematic policy for exemptions on occasion. A process for individuals wishing to request an exemption will be developed.

Appendix 1a: Sample of Web Accessibility Standards

Sample taken from the Commonwealth of Massachusetts Information Technology Division, Enterprise Web Accessibility Standards.

Introduction and Scope

The purpose of the Web Accessibility Standards is to ensure access to state web pages for everyone. The scope of these standards encompasses more than compliance with the Americans with Disabilities Act (ADA) and other statutes that call for accessible technology for people with disabilities. The standards also address access issues for people using different technologies, including older technologies (slower Internet connections, for example) and newer technologies (mobile devices, for example), as well as issues of computer literacy.

These standards apply to external and internal agency web sites, and web-based applications. The audiences for this document are agency heads, webmasters, web content providers, application developers, and vendors or contractors doing web and application development for agency sites. These groups are jointly responsible for ensuring that agency web sites are accessible.

These standards were developed by the Information Technology Division (ITD) with the participation of state web page developers, including developers with disabilities. They are intended for use by all state agencies and their contractors to address accessibility issues in web page design and application development. These standards are based on the following laws and regulations. It should be noted that these standards apply to all web sites maintained by Executive Department agencies, whether or not those sites and those agencies are subject to these laws:

Federal Government

- Section 508 of the Rehabilitation Act, 29 U.S.C. §794d (http://www.section508.gov/index.cfm?FuseAction=Content&ID=12) and its implementing regulations, 36 C.F.R. §1194.22 (Web-based intranet and internet information and applications) and 36 C.F.R. §1194.21 (Software applications and operating systems). Although Section 508 of the Rehabilitation Act does not apply to Executive Department agencies, the Commonwealth has chosen to base its web accessibility standards on the standards included in Section 508.

State Government

- Accessibility of web sites raises issues under the Americans with Disabilities Act, the Telecommunications Act, the Rehabilitation Act, and other federal and state laws. Published 1/20/05 Page 2 of 22 Enterprise Web Accessibility Standards Version 2.0
- Mass. Gen. L. ch. 151B, which prohibits discrimination against the handicapped in connection with housing and employment, and Ch. 272 sections 98 and 98A, which prohibit discrimination in public accommodations against persons with disabilities. All of these statutes apply to all state agencies.

These standards are also based on the World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines (WCAG) 1.0 (http://www.w3.org/TR/WAI-WEBCONTENT). Each Section 508 standard and W3C accessibility guideline was evaluated for applicability to the Commonwealth's environment and modified where necessary to address the Commonwealth's particular requirements. The standards and guidelines were also reviewed to ensure that they can be
implemented using currently available technologies and for compatibility with other Commonwealth policies and standards.

These standards encompass the minimum requirements needed for a state agency to ensure accessibility of its web site under all foregoing laws and the W3C guidelines. All Executive Department web pages developed subsequent to the published date of these standards must incorporate these minimum requirements into their design. As existing web pages are updated, agencies must ensure that the updated pages also meet these requirements. These standards represent a floor, not a ceiling for accessibility: agencies can supplement these standards with their own web publishing guidelines that set higher standards for their own agency.

It is important to note that, for a web site to be accessible under the statutes and regulations referenced above, it cannot simply have a second text-based page with redundant information. This is the least desirable alternative. State agencies must ensure that the functionality provided in the inaccessible site has a fully equivalent alternative in the accessible site. A delay in response or receipt of information due to this alternative page may place the agency in violation of Federal or state disability statutes, such as the Americans with Disabilities Act, which can pose serious legal risks to the agency.

Please note that these standards address most accessibility issues. They do not address accessibility of Graphic Information System (GIS) maps and other complicated images. The standards are grouped in functional categories. Accompanying each standard is:

- A brief summary of why the standard is necessary
- An explanation of what the standard means and options for implementation

*Standards that apply to web-based applications are in a separate section, grouped in functional categories.*

Included in appendices at the end of the document are:

- Sample text for an agency web accessibility statement
- Checklist that summarize the standards
- Table that relates these standards to other Massachusetts standards, Federal Section 508
Standards and the World Wide Web Consortium Content Accessibility Guidelines (WCAG)

These are a couple of samples of WCAG standards.

Section 1. Layout and Design

**Standard 1.1: A state agency web page must use HTML markup tags according to industry standards.**

**Why the standard is needed:**
The use of HTML tags (for example, headings, lists, blockquotes, tables) is currently the de facto method to achieve desired formatting effects on a web page. However, using HTML tags for presentation effect relies on how a particular version of a particular browser interprets the tags being used. If tags are misused, the browser may interpret the tags in a manner unforeseen by the web developer, making it difficult for the user to understand the organization of a page or hindering navigation.

**What the standard means:**
- When an appropriate markup language exists, web developers should use the officially sanctioned tags as established by the World Wide Web Consortium (W3C) ([http://www.w3.org](http://www.w3.org)) to promote consistency and accessibility across all websites. This means that state agencies must:
  - Avoid the misuse of tags to convey formatting.
  - Avoid using images to represent text - use text and style sheets instead. (Refer to Section 3, Graphics and Sound, for more information.)
  - Only use tables for layout as long as the screen readers can correctly translate the information for users who cannot see a screen. It is important to note that screen readers read the information contained in a table across the rows as opposed to down the columns. Please note that if a table cannot be read with a screen reader, the web page is not accessible under the statutes referenced in the Web Accessibility Standards.
  - For data tables:
    - Identify column and row headers appropriately (using the *tag*).
    - Associate table cells with the appropriate headers (for example, with the *scope* attribute).

**Standard 1.5: Forms designed to be completed online, and other interactive interface elements, must be accessible by people using assistive technology.**

**Why the standard is needed:**
Correctly designed forms allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form.

**What the standard means:**
- All form controls have text labels adjacent to them.
- Form elements have labels associated with them in the markup.
- Dynamic HTML scripting of the form does not interfere with assistive technologies.
### Appendix 2: Strategic Goal 6 Priority Worksheet Accessible Media

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Resources Needed</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prioritize and create timeline to implement action items</td>
<td>• Approval of Strategic Goal Team 6 formation</td>
<td>• Fast track formation of team to formally develop and implement compliance efforts</td>
</tr>
<tr>
<td>2. Develop and establish software, instructional materials, and media acquisition policies</td>
<td>• Participation from various stakeholders across the institution to collaborate on policies</td>
<td>• Institutional support to develop systematic plan to continually update and disseminate policies</td>
</tr>
<tr>
<td>3. Seek outside funding</td>
<td>• Collaboration with stakeholders across the institution to research sources of funding</td>
<td>• Institutional support to help seek funding and seek partnerships with other institutions or organizations</td>
</tr>
</tbody>
</table>
| 4. Expand support and training for faculty and staff | • Increase CIT and Marketing and Communication staffing to meet the increase in accessibility training and support  
  • Software to support training (i.e. Atomic Learning) | • Consider budget increase to support this need in FY 2015 |
| 5. Test web-based courses for usability and accessibility | • Training to increase expertise in assistive technologies  
  • Increase site licenses to assistive technologies as needed | • Consider budget increase to support this need in FY 2015 |
| 6. Create accessibility compliance checklists to address accessibility issues | • Collaboration from several stakeholders across the institution needed to create checklists as a starting point prior to adopting media and technology components | • Institutional support to develop systematic plan to continually update and disseminate checklists |
| 7. Caption **new** audio and video files | • Make captioning software available through learning management system (LMS) and NECC’s media channels | • Phase in institutional funding for captioning all new video and audio files |
| 8. Caption **existing** audio and video files | • Contract in-house part time paraprofessional captioner  
  • Acquire external captioning service | • Increase Learning Accommodations funding to support paraprofessionals  
  • Phase in institutional funding for captioning all existing video and audio files |
| 9. Audit NECC website for compliance | • Self-audits with specialized compliance auditing software  
  • In-depth audits for comprehensive analysis | • Phase in institutional funding for audits  
  • Prioritize high-traffic webpages for in-depth audits to highlight all accessibility issues and provide recommendations for compliance |
| 10. Establish a process to bring existing PDF files into compliance | • Collaboration from stakeholders across the institution to make large numbers of PDF files currently published online accessible | • Develop internal accountability process  
  o Outsource the compliance of PDFs to departments  
  o Request areas/departments to prioritize the need to post PDF files.  
  o Determine which content is for public and internal viewing  
  • Purchase institutional license for Adobe Acrobat Pro or individual licenses as needed |
June 29, 2010

Dear College or University President:

We write to express concern on the part of the Department of Justice and the Department of Education that colleges and universities are using electronic book readers that are not accessible to students who are blind or have low vision and to seek your help in ensuring that this emerging technology is used in classroom settings in a manner that is permissible under federal law. A serious problem with some of these devices is that they lack an accessible text-to-speech function. Requiring use of an emerging technology in a classroom environment when the technology is inaccessible to an entire population of individuals with disabilities—individuals with visual disabilities—is discrimination prohibited by the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 (Section 504) unless those individuals are provided accommodations or modifications that permit them to receive all the educational benefits provided by the technology in an equally effective and equally integrated manner.

The Departments of Justice and Education share responsibility for protecting the rights of college and university students with disabilities. The Department of Justice is responsible for enforcement and implementation of title III of the ADA, which covers private colleges and universities, and the Departments of Justice and Education both have enforcement authority under title II of the ADA, which covers public universities. In addition, the Department of Education enforces Section 504 with respect to public and private colleges and universities that receive federal financial assistance from the Department of Education. As discussed below, the general requirements of Section 504 and the ADA reach equipment and technological devices when they are used by public entities or places of public accommodation as part of their programs, services, activities, goods, advantages, privileges, or accommodations.

Under title III, individuals with disabilities, including students with visual impairments, may not be discriminated against in the full and equal enjoyment of all of the goods and services of private colleges and universities; they must receive an equal opportunity to participate in and benefit from these goods and services; and, they must not be provided different or separate goods or services unless doing so is necessary to ensure that access to the goods and services is equally as effective as that provided to others.1 Under title II, qualified individuals with disabilities may not be excluded from participation in or denied the benefits of the services, programs, or activities of, nor subjected to discrimination by, public universities and colleges.2 Both title II and Section 504 prohibit colleges and universities from affording individuals with disabilities with an opportunity to participate in or benefit from college and university aids, benefits, and services that is unequal to the opportunity afforded others.3 Similarly, individuals with disabilities must be provided with aids, benefits, or services that provide an equal opportunity to achieve the same result or the same level of achievement as others.4 A college or university may provide an individual with a disability, or a class of individuals with disabilities, with a different or separate aid, benefit, or service only if doing so is necessary to ensure that the aid, benefit, or service is as effective as that provided to others.5

The Department of Justice recently entered into settlement agreements with colleges and universities that used the Kindle DX, an inaccessible, electronic book reader, in the classroom as part of a pilot study with Amazon.com, Inc. In summary, the universities agreed not to purchase, require, or recommend use of the Kindle DX, or any other dedicated...
electronic book reader, unless or until the device is fully accessible to individuals who are blind or have low vision, or the universities provide reasonable accommodation or modification so that a student can acquire the same information, engage in the same interactions, and enjoy the same services as sighted students with substantially equivalent ease of use. The texts of these agreements may be viewed on the Department of Justice’s ADA Web site, www.ada.gov. (To find these settlements on www.ada.gov, search for “Kindle.”) Consistent with the relief obtained by the Department of Justice in those matters, the Department of Education has also resolved similar complaints against colleges and universities.

As officials of the agencies charged with enforcement and interpretation of the ADA and Section 504, we ask that you take steps to ensure that your college or university refrains from requiring the use of any electronic book reader, or other similar technology, in a teaching or classroom environment as long as the device remains inaccessible to individuals who are blind or have low vision. It is unacceptable for universities to use emerging technology without insisting that this technology be accessible to all students.

Congress found when enacting the ADA that individuals with disabilities were uniquely disadvantaged in American society in critical areas such as education. Providing individuals with disabilities full and equal access to educational opportunities is as essential today as it was when the ADA was passed. In a Proclamation for National Disability Employment Awareness Month, President Obama underscored the need to “strengthen and expand the educational opportunities for individuals with disabilities,” noting that, “[i]f we are to build a world free from unnecessary barriers... we must ensure that every American receives an education that prepares him or her for future success.” http://www.whitehouse.gov/the-press-office/presidential-proclamation-national-disability-employment-awareness-month (September 30, 2009) (emphasis added).

Technology is the hallmark of the future, and technological competency is essential to preparing all students for future success. Emerging technologies are an educational resource that enhances the experience for everyone, and perhaps especially for students with disabilities. Technological innovations have opened a virtual world of commerce, information, and education to many individuals with disabilities for whom access to the physical world remains challenging. Ensuring equal access to emerging technology in university and college classrooms is a means to the goal of full integration and equal educational opportunity for this nation’s students with disabilities. With technological advances, procuring electronic book readers that are accessible should be neither costly nor difficult.

We would like to work with you to ensure that America’s technological advances are used for the benefit of all students. The Department of Justice operates a toll-free, technical assistance line to answer questions with regard to the requirements of federal laws protecting the rights of individuals with disabilities. For technical assistance, please call (800) 514-0301 (voice) or (800) 514-0383 (TTY). Specialists are available Monday through Friday from 9:30 AM until 5:30 PM (ET) except for Thursday, when the hours are 12:30 PM until 5:30 PM. These specialists have been trained specifically to address questions regarding accessible electronic book readers. Colleges, universities, and other stakeholders can also contact the Department of Education’s Office for Civil Rights for technical assistance by going to OCR’s Web site at http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm. We appreciate your consideration of this essential educational issue and look forward to working with you to ensure that our nation’s colleges and universities are fully accessible to individuals with disabilities.

Sincerely,

Thomas E. Perez  
Assistant Attorney General Civil Rights  
Division U.S. Department of Justice

Russlynn Ali  
Assistant Secretary for Civil Rights U.S. Department of Education
Appendix 4: Legal Issues

The following section on legal issues sites various complaints brought against institutions of higher learning as well as media companies such as Netflix and CNN, by The National Federation of the Blind (NF), National Association of the Deaf (NAD), Greater Los Angeles Agency on Deafness (GLAD), or the Alliance for Disability and Students. As a result of these complaints, the institutions and businesses have had to work on implementing strategies to meet accessibility requirements as outlined by federal and state laws. Included in this section of legal issues is the complaint filed by The Author’s Guild against multiple universities for copyright infringement. The case was dismissed by a U.S. District Court sitying the Chafee amendment to the Copyright Act; this amendment indicates that you are exempted from copyright law if you are duplicating materials for use with those who are blind or have disabilities.

Review of Recent Legal Issues in Higher Education and Accessibility

(Feb) 2009- Law School Admissions Council

The National Federation of the Blind (NFB) filed a complaint against the LSAC (Law School Admissions Council) under the Disabled Persons Act, California Civil Code §§ 54 et seq., and the Unruh Civil Rights Act, California Civil Code §§ 51 et seq for inaccessible web content and LSAT preparation materials. Law schools across the nation use the LSAC web portal as a mechanism for students to apply for admission to law school. The California plaintiffs complained that the inaccessibility of the Pennsylvania-based website portal complicated their ability to apply for law school and denied them their rights under ADA Titles II and III. The April 2011 settlement included an agreement to make web content and services conform to WCAG 2.0 AA within 5 months (by September of 2011).

This suit had a collateral effect as NFB filed complaints with the Department of Justice against institutions that use the inaccessible LSAC process as their primary means of admissions. This happened over several months during the Spring of 2010. NFB argued that this practice violated Title III of the ADA. These schools included:

1. Atlanta’s John Marshall Law School
2. Cardozo School of Law
3. Chapman University School of Law
4. University of Chicago School of Law
5. University of Denver
6. Gonzaga University School of Law
7. Lee University School of Law
8. Northeastern University School of Law
9. Sturm College of Law
10. Thomas Jefferson School of Law
11. University of California Hastings College of the Law
12. University of Miami School of Law
13. Washington School of Law
14. William Mitchell College of Law
15. Whittier College Law School
16. Yeshiva University

Settlements with institutions (e.g., See the John Marshall settlement) included an institutional requirement to notify students that the LSAC application process is not accessible and to stop using LSAC if accessibility agreements were not met by LSAC on the approved timeline. Also, schools are to fully consider applications that do not come through the LSAC process.

(June) 2009- Kindle DX

Both the National Federation of the Blind (NFB) and the American Council of the Blind (ACB) filed a discrimination complaint against Arizona State University for using inaccessible technologies (i.e., Kindle DX). Other institutions were
drawn into this complaint. Namely Case Western Reserve University in Cleveland, Pace University in New York City and Reed College in Portland, Ore. These complaints were settled in January of 2010 and those institutions agreed not to use emerging technologies that were not accessible. However the dispute created a clarion call from the U.S. government to leadership in higher education. The Executive branch (i.e., the White House) sent a letter to every college and university president across the nation on the important issue of digital accessibility. This letter, written jointly by the Departments of Justice and Education and indicated:

“Technology is the hallmark of the future, and technological competency is essential to preparing all students for future success. Emerging technologies are an educational resource that enhances learning for everyone, and perhaps especially for students with disabilities. Technological innovations have opened a virtual world of commerce, information, and education to many individuals with disabilities for whom access to the physical world remains challenging. Ensuring equal access to emerging technology in university and college classrooms is a means to the goal of full integration and equal educational opportunity for this nation’s students with disabilities...”

The letter further admonished decision-makers in higher education by concluding; “It is unacceptable for universities to use emerging technology without insisting that this technology be accessible to all students.”

(Nov) 2010- Penn State

The NFB filed a complaint against Penn State University stating that the institution violated the rights of both students and faculty who were blind by denying them information and services available to others on the web and guaranteed to them under Title II of the ADA and Section 504 of the Rehabilitation Act. They called out several units across the institution (e.g., they highlighted the library, the English and Computer Science departments, and also their Office of Disability Services). This was resolved in 2011 and Penn State agreed, as part of the settlement to “continue to work on implementing a strategy to make all electronic and information technology systems used on its campuses fully accessible to blind students, faculty and staff.”

(March) 2011- Northwestern University and New York University

The NFB filed a complaint against two universities for using the Google framework at their institutions, when the product was not accessible. While Google is working to make its platform more accessible, it has yet to complete this task. This is reverberating at other campuses that are struggling to address the issue of accessibility requirements during the procurement process.

(June) 2011 Florida State University

The NFB filed a complaint on behalf of 2 blind students who had not found a satisfactory resolution to inaccessible course content. In this instance it was a math class that was not accessible to them. This was resolved in spring of 2012. In addition to FSU’s agreement to make content accessible, they were required to pay damages to the plaintiffs.

(Sept) 2012 University of Montana

The Alliance for Disability and Students filed a complaint with the Office of Civil Rights noting discrimination because of inaccessible web content and services. In the complaint several specific items were targeted including inaccessible class assignments, inaccessible live chat and discussion board, videos without captions, and an inaccessible registration system.

Other Recent Complaints That Have Implications for Higher Education

2010- National Association of the Deaf (NAD) filed a complaint that Netflix engaged in discrimination by denying captions on materials that are streamed online. Their 2012 settlement includes a provision to caption all streamed media by 2014. Netflix will also pay $755,000 in legal fees.

(Feb) 2012 – Greater Los Angeles Agency on Deafness (GLAD) filed a complaint against CNN for failing to provide captions on CNN.com. CNN sought to dismiss the suit as an infringement of their first amendment rights to free speech; this is
because the current errors inherent in captioning would cause CNN to create erroneous speech not in line with their editorial standards. In March, a judge in the U.S. District Court for the Northern District of California disagreed, and ruled against CNN. This case continues on appeal with the Ninth Circuit Court of Appeals.

The Authors Guild filed a complaint against multiple universities (i.e., University of California, University of Wisconsin, Indiana University, Cornell University and University of Michigan) for copyright infringement when they scanned and placed books into the HathiTrust Digital Library (used by Google for digital texts). In October of 2012, a US District Court dismissed the suit and indicated that digitizing works at a university does not violate fair use. This ruling is seen as transformative by web accessibility advocacy groups because it contains the Chafee amendment to the Copyright Act; this amendment indicates that you are exempted from copyright law if you are duplicating materials for use with those who are blind or have disabilities. In the past some have argued that digitizing texts for use by those with disabilities is in fact a violation of copyright law. Unless challenged, the judge's ruling has put that to rest. Fair use where digitizing text is involved currently includes preservation of books, criticism, commentary, news reporting, teaching, scholarship research purposes, and use by people with disabilities.

One thing is clear, until all students, staffs, and faculties with disabilities have full access to digital content those in higher education will continue to see complaints and legal action. Waiting for a student to bring forth a complaint may no longer be an action that those in leadership are willing to take. With that said, a transformation of an institution’s web architecture to one that is accessible is not easy, and it takes time.
Appendix 5: Legal Perspective from Massachusetts Community College Council
Below is a document from Kenneth A. Tashjy, General Counsel for the Massachusetts Community College System.

It is a statement regarding legal obligations pertaining to web accessibility. Click on the link to read the Commonwealth’s Web Accessibility Standards, which were developed by the Commonwealth's Information Technology Division (ITD).

Web accessibility for individuals with disabilities is a requirement under state and federal law. In Massachusetts, the Commonwealth’s Information Technology Division has developed Web Accessibility Standards in order to ensure access to state web pages for everyone. The scope of these standards encompasses more than compliance with the Americans with Disabilities Act (ADA) and other statutes that call for accessible technology for people with disabilities. The Commonwealth’s accessibility standards were developed with the participation of state web page developers, including developers with disabilities. They are intended for use by all state agencies and their contractors to address accessibility issues in web page design and application development. These standards are based on the following laws and regulations.

Federal Government

- Section 504 of the Rehabilitation Act, 42 U.S.C. §2000d, which applies to all state agencies, and its implementing regulations (for example, 42 C.F.R. §84).
- Section 508 of the Rehabilitation Act, 29 U.S.C. §794d and its implementing regulations, 36 C.F.R. §1194.22 (Web-based intranet and internet information and applications) and 36 C.F.R. §1194.21 (Software applications and operating systems). Although Section 508 of the Rehabilitation Act does not apply to Executive Department agencies, the Commonwealth has chosen to base its web accessibility standards on the standards included in Section 508.

State Government

- Mass. Gen. Law. ch. 151B, which prohibits discrimination against the handicapped in connection with housing and employment. All of these statutes apply to all state agencies.

These standards are also based on the World Wide Web Consortium’s (W3C) Web Content Accessibility Guidelines (WCAG) 1.0 (http://www.w3.org/TR/WAI-WEBCONTENT)

Each Section 508 standard and W3C accessibility guideline was evaluated for applicability to the Commonwealth's environment and modified where necessary to address the Commonwealth’s particular requirements. The standards and guidelines were also reviewed to ensure that they can be implemented using currently available technologies and for compatibility with other Commonwealth policies and standards.

These standards encompass the minimum requirements needed for a state agency to ensure accessibility of its web site under all foregoing laws and the W3C guidelines. All web pages developed subsequent to the published date of these standards must incorporate these minimum requirements into their design. As existing web pages are updated, agencies must ensure that the updated pages also meet these requirements. These standards represent a floor, not a ceiling for accessibility.
Appendix 6: Operational Definitions

**Accessible media**: Alternate-format materials that support access and enable participation in the general curriculum by students with disabilities. Accessible media can be used to support diverse learners in the classroom.

**Alternative keyboard**: A keyboard that is different from a standard computer keyboard in its size or layout of keys.

**Assistive technology**: Any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.

**Augmentative communication device**: Hardware that allows a person who has difficulty using their voice clearly to use words or symbols for communication. It may range in complexity from a simple picture board to complex electronic devices that allow personalized, unique construction of ideas.

**Browser**: Software designed to access and display information available on the web. Browsers may be graphical or text-based. Text-only browsers cannot display images, sound clips, video and plug-in features that graphical browsers can. Talking browsers are also available for use by people who have difficulty reading text due to a learning disability or visual impairment.

**Closed Circuit TV Magnifier (CCTV)**: Camera used to magnify books or other materials to a monitor or television.

**FM Sound Amplification System**: Electronic amplification system consisting of three components: a microphone/transmitter, monaural FM receiver and a combination charger/carrying case. It provides wireless FM broadcast from a speaker to a listener who is hard of hearing.

**Mouse emulation**: A method of having an alternative device and/or software, such a switch based system, serve the role of a mouse.

**Reading system**: Hardware and software designed to provide access to printed text for people with visual impairments, mobility impairments, or learning disabilities. Character recognition software controls a scanner that takes an image of a printed page, converts it to computer text using recognition software and then reads the text using a synthesized voice.

**Refreshable Braille Display**: Hardware connected to a computer that echoes screen text on a box that has cells consisting of pins that move up and down to create Braille characters.

**Screen enlargement**: Hardware and/or software that increase the size of characters and text on a computer screen (i.e. ZoomText software).

**Screen reader**: Software used to echo text on a computer screen to audio output, often used by people who are blind, with visual impairments, or with learning disabilities (i.e. JAWS software).

**Screen resolution**: Refers to the clarity or sharpness of an image. For computer monitors, this term indicates the number of dots on the screen used to create text and graphics. Higher resolution means more dots, indicating increased sharpness and potentially smaller text.

**Trackball**: A mouse alternative that is basically an upside-down mouse. Useful for some people with mobility impairments because it isolates pointer movement from button clicking.

**Word prediction**: Software that reduces the number of keystrokes needed to type words and sentences. As characters are entered on either a standard, alternative or virtual keyboard, suggested completions of the word that has been started are provided to the user.

**Types of Disabilities**

**Hard of Hearing**: Complete or partial loss of ability to hear caused by a variety of injuries or diseases including congenital defects.

**Mobility impairment**: Disability that affects movement ranging from gross motor skills such as walking to fine motor movement involving manipulation of objects by hand.
Physical or mental impairment: Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genitourinary; hemic and lymphatic; skin; and endocrine; or any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning.

Sensory impairment: A disability that affects touch, sight and/or hearing.

Specific learning disability: Disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in difficulties listening, thinking, speaking, reading, writing, spelling, or doing mathematical calculations. Frequent limitations include hyperactivity, distractibility, emotional instability, visual and/or auditory perception difficulties and/or motor limitations, depending on the type(s) of learning disability.

Speech impairment: Problems in communication and related areas such as oral motor function, ranging from simple sound substitutions to the inability to understand or use language or use the oral-motor mechanism for functional speech.

Traumatic Brain Injury (TBI): Open and closed head injuries resulting in impairments in one or more areas, including cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital, degenerative, or induced by birth trauma.

Other Related Terms

Access barriers: Any obstruction that prevents people with disabilities from using standard facilities, equipment and resources.

Accessible: In the case of a facility, readily usable by a particular individual; in the case of a program or activity, presented or provided in such a way that a particular individual can participate, with or without auxiliary aid(s); in the case of electronic resources, accessible with or without assistive computer technology.

Accessible web design: Creating web pages according to accepted design principles to eliminate or reduce barriers, including those that affect people with disabilities.

Accommodation: An adjustment to make a program, facility, or resource accessible to a person with a disability.

Reader: Volunteer or employee of an individual with a disability (e.g., visual impairment, learning disability) who reads printed material in person or records to audiotape.

Large print books: Most ordinary print is six to ten points in height (about 1/16 to 1/8 of an inch). Large type is fourteen to eighteen points (about 1/8 to 1/4 of an inch) and sometimes larger. The format of large print books is also proportionately larger (usually 8 1/2 x 11 inches). User defined font size -retrofitted

ALT (alt text) attribute: HTML code that works in combination with graphical tags to provide alternative text for graphical elements.

Braille: System of embossed characters formed by using a Braille cell, a combination of six dots consisting of two vertical columns of three dots each. Each simple Braille character is formed by one or more of these dots and occupies a full cell or space. Some Braille may use eight dots.

Captioned film or videos: Transcription of the verbal portion of films or videos displayed to make them accessible to people who are deaf or have auditory processing difficulties.

Captioning: Text that is included with video presentations or broadcasts that enable people who are Deaf or Hard of Hearing to have access to the audio portion of the material.
**Descriptive video**: Descriptive videos are regular, commercial films which have been augmented with special narration which describes the action for people who have visual impairments. As a descriptive video plays, it describes the visual elements of action, characters, locations, costumes and sets to the viewer without interfering with the movie's dialogue or sound effects.

**Interpreter**: An interpreter is a specially trained professional (certified) whose job is to convey the messages of people who do not share the same language, culture, or mode of communication. The purpose of providing an interpreter is to allow hearing, deaf and hard of hearing people equal access to information and interactions.

**Mainstreaming, inclusion**: The inclusion of people with disabilities, with or without special accommodations, in programs, activities, and facilities with their non-disabled peers.

**Multimedia**: In terms of electronic information, any content presented through several formats such as text, pictures, information graphics, video, animation, and sound

**Optical character recognition (OCR)**: Technology system that scans and converts printed materials into electronic text.

**Sign language**: A communication commonly used by deaf and hard of hearing people. The gestures or symbols in sign language are organized in a linguistic way. Each individual gesture is called a sign. Each sign has three distinct parts; the hand shape, the position of the hands, and the movement of the hands. American Sign Language (ASL) is the most commonly used sign language in the United States. Deaf people from different countries use different sign languages.

**Speech input or speech recognition**: A method of controlling a computer and creating text by dictation. Speech input software is combined with a microphone.

**Streaming media**: A method of transferring audio and/or video via a network from a server to an end user's computer. During the transmission, the material is displayed or played on the target computer.

**Universal design**: Designing programs, services, tools, and facilities so that they are useable, without modification, by the widest range of users possible, taking into account a variety of abilities and disabilities.

**Universal design of instruction**: The design of instructional materials and activities that make learning achievable by students with a wide variety of abilities and disabilities.

**VPAT**: Volunteer Product Accessibility Template is a standardized form developed by the Information Technology Industry Council to show how a software product meets key regulations of Section 508 of the Rehabilitation Act.
Appendix 7: Process Management Tool
Due to the vast scope of this project, the team utilized a fishbone diagram to organize, facilitate, and record the results of various brainstorming sessions.

**NECC Accessible Media Vision and Guidelines: Fishbone Diagram**

- **Measurement**
  - Accessibility Audit
  - Departmental Reviews
  - Consumer feedback
  - Sponsor updates
  - Academic Affairs Leadership Meetings
  - Departmental Meetings

- **People**
  - Organizational Oversight
  - NECC Point People/Key Players
  - Training Faculty/Staff

- **Communication**
  - Accessibility of State and Local Government Websites Office for Civil Right’s
  - Federal LAWS, ADA, 504/508 Standards-WWW Consortium
  - Best Practices/what are other colleges doing?
Appendix 8: Awareness Efforts
The flyer below was used to promote the process management project.

Accessible Media Vision and Guidelines
Process Management Project
How do we ensure Accessible Media?

Some examples include: web sites, digital content, systems: Blackboard, Interview Exchange, Self-Service, email, Degree Works, etc.

Accessible Media Vision and Guidelines Process Management Project
Sponsors: Mary Ellen Ashley, Executive VP Enrollment Services and William Heineman, Vice President of Academic Affairs and Student Services

Why? Due to ADA AA and Section 504/508 regulations and the college’s increasing utilization of technology, it is critical to have an institutional vision and specific guidelines to ensure we are as compliant as possible.

What? NECC needs to plan how we will develop, use or purchase media to help ensure access for people with various disabilities- some examples include: difficulty with visual images, font size, sounds, using a mouse, reading or may depend on assistive technology such as screen readers.

How? Our group has 12 active members. The Team is seeking faculty participation and input as it strives to create an institutional vision and accessible media guidelines.
Can you answer "YES" to any of these questions?

- Do you use Blackboard or publisher websites (MyLab)?
- Do you create websites for posting information?
- Do you create or post documents or videos for class?
- Do you use technology (i.e., wikis, blogs, etc.) for your class assignments?
- Do you use visuals or play audio/video in the classroom that gives important info pertaining to the class?
- Do you use webinars, or other classroom capture or conference technology or record your class for review?

If you answered "YES" then you play a role in providing accessibility!

NECC FACULTY
We want your input!

WHO
The Accessible Media Vision and Guidelines Process Management team is promoting awareness and the use of best practices for making media accessible at NECC. We want to support you in making your course materials accessible.

WHY
NECC is committed to providing equal opportunity and an educational and work environment free from any discrimination, in accordance with the federal ADA law.

WHEN
We invite your questions about accessibility and media. We will be following up with you at your next division meeting and by email and a faculty forum.

You may reach the Accessible Media group at accessiblemedia@necc.mass.edu.

Appendix 10a: Faculty Feedback Activity
Process Management Subcommittee on Accessible Media/ Frequently Asked Questions
We discussed how to best to raise awareness among faculty regarding media accessibility. We agreed that faculty questions with answers could later on be included on the NECC website. We developed a flyer and index cards and asked faculty at department meetings to tell us their questions (see below). This responsibility was shared by Cathy Latourelle, Susan Martin, Deborah McKinney and Melba Acevedo. We gave a brief presentation and explained that this project was designed to meet ADA law and create materials that were accessible to all students, staff and faculty. We have gathered these questions and in phase two we plan to figure out the resources needed to address these questions.

Examples of faculty questions...

- Currently we can’t adopt old videos into CDs closed captioning? We don’t have technology in house to do this. – What would this cost to convert old technology?
- Should we have special training as faculty on the laws on student fairness
- How would I know if a video I use in my online public speaking class is captioned?
- Does YouTube have a function to allow captioning? I use this source in my class a lot because of the nature of my course topic

The majority of questions were about closed captioning which is something they are familiar with. It seems that they are not aware of other tools such as speech reader or Jaws or other tools available to students with disabilities. Future work on this project will include adding technical questions with answers on our NECC website for faculty/staff/student resources.

Appendix 10b: Faculty Questions and Comments on Accessible Media

<table>
<thead>
<tr>
<th>QUESTIONS &amp; COMMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If you have voice over with a PowerPoint presentation, do all faculty also provide class notes? What percentage?</td>
</tr>
<tr>
<td>2. Currently we can’t adopt old videos into CDs closed captioning – [we] don’t have technology in house to do this. What would this cost to convert old technology?</td>
</tr>
<tr>
<td>3. How do you know if a video is closed captioned?</td>
</tr>
<tr>
<td>4. Should we have special training as faculty on the laws on student fairness?</td>
</tr>
<tr>
<td>5. What should we teach to students on copyright guidelines?</td>
</tr>
<tr>
<td>6. Is there any way for videos and DVDs that were not purchased with captioning to have them added? Assume no. (Just want to double-check for most popular videos.)</td>
</tr>
<tr>
<td>7. What services can you provide for us the teachers?</td>
</tr>
</tbody>
</table>
| 8. *closed captioning* signing ASL
  How do we get some video without close captioning to be “retrofitted” with close captioning?
  Also how do we retro fit power point with descriptive video? |
| 9. How would I know if a video I use in my online public speaking class is captioned?
  (I use videos from an E-book (McGraw Hill), and TED videos. I’ve never had a deaf student enroll in public speaking online or face-to-face.) |
| 10. What are the obligations of students who have disabilities to inform faculty? |
| 11. Are PowerPoints that we create an issue? |
| 12. Many student activities require statements about interpreting services. Is there standard wording? I’ve seen
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>13.</strong></td>
<td>Univ. Designing (i.e.: captioning) Captioning helps all students...not just deaf and hard of hearing. Could we have a resource that could do the work for our materials?</td>
</tr>
<tr>
<td><strong>14.</strong></td>
<td>Does YouTube have a function to allow captioning? I use this source in my class a lot because of the nature of my course topic.</td>
</tr>
<tr>
<td><strong>15.</strong></td>
<td>Guest speakers &amp; student functions should be also be addressed</td>
</tr>
<tr>
<td><strong>16.</strong></td>
<td>Can there be a central place (a library libguide) where faculty can access examples &amp; things already done in this regard (i.e., videos that have captioning)? How will any guidelines be enforced?</td>
</tr>
<tr>
<td><strong>17.</strong></td>
<td>Is there a time-line for reviewing &amp; updating videos to ensure they meet requirements? Will this process be considered when planning budgets? How/When will adjunct faculty be informed of requirements &amp; resources available from NECC?</td>
</tr>
<tr>
<td><strong>18.</strong></td>
<td>Insert – student’s profile with disabilities on the NECC Degreeworks (DW)</td>
</tr>
<tr>
<td><strong>19.</strong></td>
<td>How does one make “your” website accessible for the screen reader?</td>
</tr>
<tr>
<td><strong>20.</strong></td>
<td>A lot of the math courses use Pearson’s “My Math Lab.” Is this “media accessible”?</td>
</tr>
<tr>
<td><strong>21.</strong></td>
<td>If no student presents an accommodation plan, do I need to use closed-captioned video?</td>
</tr>
<tr>
<td><strong>22.</strong></td>
<td>What about the legacy online courses? How are the older courses that use media going to be made accessible? How is this going to be prioritized?</td>
</tr>
<tr>
<td><strong>23.</strong></td>
<td>How are the copyright issues going to be addressed when making media accessible? Who is responsible for seeking the copyright rights?</td>
</tr>
<tr>
<td><strong>24.</strong></td>
<td>Do students have access to assistive technologies? Where do they get access to them?</td>
</tr>
<tr>
<td><strong>25.</strong></td>
<td>I tend to use PDFs because they are a technologically universal format - they always look the same regardless of devices and provide a free viewer for all devices. I avoid Word docs because they are a proprietary format and although students do have access at school, some do not have access to Microsoft Office at home - some use open source alternatives and some use Linux (Microsoft Office is not available on Linux). Do PDF’s have the same level of accessibility as Microsoft Office documents? If I create an accessible file in Microsoft Office and save it as a PDF, does it maintain the accessibility? Does the PDF need additional accessibility information? If I provide an accessible Microsoft Office document, will other open source alternatives maintain the accessibility?</td>
</tr>
<tr>
<td><strong>26.</strong></td>
<td>I use snippets of computer code in documents and slides. I do not want students to be able to copy and paste this code - I want them to type it out if they want to use it. I use an image to accomplish this. How would a screen reader, or other device describe a texted-based code example? Would it just read it as if it were English written sentences? That would be terribly confusing. If I do need it in text-based format for accessibility purposes, how could I prevent students from copying and pasting the text? If it is image based code, how should it be described in the alt text?</td>
</tr>
</tbody>
</table>
27. The pre-captioned videos (on-demand) available through the library and other educational services do not cover a lot of the topics I teach (specific programming languages and current technologies). News programs and other videos available online are often useful.

If I choose to use these, but they do not offer captioning can I provide a transcript?

If the video is available online (say a Frontline episode) and it does not have captioning, BUT the DVD does have captions and is available in the library, can I offer that as an alternative rather than producing a transcript?

Is there any kind of transcription service available to faculty? If I have to transcribe a 5 minute video, that is OK. If I have to transcribe a 60 minute video that could take 5 or 6 hours.

28. I would like to see a list of common guidelines for online materials to be accessible and common mistakes people make. We will be required to add “voice overs” to explain what is on the screen to non-sighted students? Will Natural Reader in Atomic Learning solve this above question?

29. If we post PDFs, will the Natural Reader program suffice as making it accessible? When we post photos, should we do more than title them on the Blackboard course? Do we also need to describe the pictures?
Appendix 11: Feedback from Students
This is a questionnaire that was administered to students registered with The Learning Accommodations Center and Deaf and Hard of Hearing Services.

Accessibility Questionnaire regarding technology at NECC - Spring 2013

Do you feel the NECC website is accessible to you? Were you able to work with Professors to receive the necessary accommodations regarding technology for your courses?

Did you have any difficulties accessing course materials with or without your own assistive technology tools? What type of “technology accessibility” improvements do you wish to see at NECC?

Do you think that faulty/staff are well trained with technology needs regarding accessibility?

Do you feel online courses are accessible?

In general, do you feel that NECC media such as radio, TV, internet (FB, Twitter, Utube, Vlog, Blog), newspaper, etc. are accessible to you?

This survey is being administered by the Accessible Media Vision and Guidelines Process Management Team

Sponsored by: Mary Ellen Ashley- Executive VP Enrollment Services & William Heineman- VP of Academic Affairs & Student Services

Project Statement: Due to current legal regulations and the college’s increasing utilization of technology, it is critical to have an institutional vision and specific guidelines to ensure we are as compliant as possible

NECC needs to plan how we will develop, use or purchase media to help ensure access for people with various disabilities. The Team is seeking input from individuals with disabilities as it strives to create an institutional vision and accessible media guidelines.

For more information please contact Co-facilitators: Susan Martin- Director- of the Learning Accommodations, 978-556-3647. smartin@necc.mass.edu and Melba Acevedo-Director- of the Center for Instructional Technology, 978-556-3682. macevedo@necc.mass.edu
Appendix 11a: Feedback from Students

Comments from the Accessibility Questionnaire regarding technology at NECC - Spring 2013

Question 1. Do you feel the NECC website is accessible to you?

Responses:
1. Yes, so far
2. Yes, most of it
3. Not yet explored website
4. Yes after teacher or tech person showed me how at first
5. Yes, it’s accessible
6. Yes, I am happy with it, I understand how to use website
7. Mostly yes, but sometimes overwhelmed with too many emails
8. Yes so far I am okay
9. Yes but visually overwhelming

Question 2. Were you able to work with Professors to receive the necessary accommodations regarding technology for your courses?

Responses:
1. Some not using captions, some not aware of Deaf culture, like for u-tube videos
2. Yes, but some not using videos with captions
3. Videos not captioned, some not familiar with using interpreters
4. Yes, except her two movies weren’t captioned
5. Yes I had no problem, but I had to prompt them to be aware
6. College Success Semester, I was not happy because teacher was too fast
7. Some professors are not sensitive for need for extended time
8. Some instructors insensitive and walk in front of Interpreters
9. Yes, I haven’t needed much help in this area

Question 3. Did you have any difficulties accessing course materials with or without your own assistive technology tools?

Responses:
1. No, not so far
2. No
3. No
4. Hard to focus on computer activity during same time instructor is appealing with his own power point, have to split eyes on both at same time
5. No difficulties so far
6. I have had difficulty with power points

Question 4. What type of “technology accessibility” improvements do you wish to see at NECC?

Responses:
1. More caption accessibility
2. Need more Utube captions
3. Movies shown in class or open house “Human Services” need to be captioned
4. More interpreters and students flexibility for services i.e.; Notetakers
5. Everything seemed fine
6. Instructors should respond to emails
Question 5. Do you think that faulty/staff is well trained with technology needs regarding accessibility?

Responses:

1. ½ ½  
2. Yes  
3. 50/50  
4. Some are great; however some need more training  
5. Some are and some aren’t  
6. Yes, the teacher did well and is trained  
7. No not many of them  
8. Yes, but they forget to caption U-Tubes

Question 6. Do you feel online courses are accessible?

Responses:

1. Na  
2. Na  
3. NA  
4. For Deaf, it depends on what the course is, ifs it’s a basic course like Algebra, yes  
5. Somewhat, it would be nice to have assistance of interpreter (online)  
6. Have not taken online courses yet  
7. NA  
8. Visually confusing  
9. A streamlined layout would be more helpful

Question 7. In general, do you feel that NECC media such as radio, TV, internet (FB, Twitter, Utube, Vlog, Blog), newspaper, etc. are accessible to you?

Responses:

1. Need more visual information like signage  
2. So far, yes  
3. Yes but need more visual media of D/HH students like signage, marquee, TV w/closed captions etc.  
4. Yes, but I wish more television across campus with news and announcements that are captioned  
5. Yes. But some aren’t accessible because they don’t have closed captions  
6. Yes I use online, internet for school and TV News for school closings  
7. Apparently  
8. Yes  
9. na
Appendix 12: Resources

Sample Accessible Media Policies and Procedures & Resources

- Dear Colleague Frequently Asked Questions http://www2.ed.gov/about/offices/list/ocr/docs/dcl-ebook-faq-201105.pdf
- Sloan consortium Integrating Accessibility into Higher Education http://commons.sloanconsortium.org/groups/integrating-accessibility-online-higher-education
- Penn State Accessibility http://accessibility.psu.edu/
- High Tech Training Unit of the California Community College System http://www.htctu.net/
- University of Wisconsin Madison http://www.doit.wisc.edu/accessibility/
- University of Illinois at Urbana-Champaign http://multimedia.illinois.edu
- Quality Matters Accessibility Policy for Online Courses http://www.qmprogram.org/template-accessibility-policy-online-courses
Appendix 13: Captioning Quotes and Information

**3Play Media Work Order**

<table>
<thead>
<tr>
<th>Company</th>
<th>Northern Essex Community College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Contact</td>
<td>Cherie Hagen</td>
</tr>
<tr>
<td>Company Email</td>
<td><a href="mailto:chagen@necc.mass.edu">chagen@necc.mass.edu</a></td>
</tr>
<tr>
<td>Company Phone</td>
<td>(978) 556-3685</td>
</tr>
</tbody>
</table>

This quote is valid for 30 days.

**Transcription and Captioning Fees**

<table>
<thead>
<tr>
<th>Transcription and Captioning Hours</th>
<th>Discount</th>
<th>Hourly Rate</th>
<th>Total Fees Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>6% with pre-purchase</td>
<td>$141</td>
<td>$14,100</td>
</tr>
</tbody>
</table>

Volume pricing outlined in Exhibit A

**Transcript and Caption Features**

- Includes all outputs for transcripts, closed caption, interactive tools, and applications.
- Full access to 3Play Media online account system including ability to edit captions text.
- Indefinite storage and access to your transcript/caption files.

**Transcription and Captioning Terms**

- Standard turnaround within 4 business days for up to 40 hours of content, timeline for larger quantities to be discussed.
- Rush 1-business-day service is available for an extra $90/hour charge.
- Expedited 2-business-day service is available for an extra $45/hour charge.
- Same-day 8-hour service is available for an extra $150/hour charge (file limitations apply).
- Surcharge for extremely difficult files is $60/hour.
- No minimum file size.
- Exact billing – each file is prorated to the nearest second.
- 3Play Media reserves the right to refuse content if deemed untranscribable (i.e. very poor audio quality, indecipherable accent, etc.).
- Payment terms: net 30.
Automated Captioning & Transcription Pricing – Education

AST’s CaptionSync web-automated captioning is straightforward and simple, and significantly faster and less expensive than alternative captioning methods. Because CaptionSync is a web-based service, there is no software to purchase, and it is always available.

Simply upload your media to our CaptionSync server and select whether you want captioning, transcription, or both (a transcript is required in order to create caption output). The outputs you select are returned electronically -- no need to ship anything.

<table>
<thead>
<tr>
<th></th>
<th>Captioning Only (have transcript)</th>
<th>Transcript Only</th>
<th>Captioning &amp; Transcription (need transcript)</th>
<th>Production Transcripts (time stamped)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Turnaround</td>
<td>$1.15 / minute</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 3-day Turnaround</td>
<td>$1.50 / minute</td>
<td>$2.65 / minute</td>
<td>$2.08 / minute</td>
<td></td>
</tr>
<tr>
<td>RUSH 24-hour Turnaround</td>
<td>$2.00 / minute</td>
<td>$3.15 / minute</td>
<td>$2.58 / minute</td>
<td></td>
</tr>
</tbody>
</table>

Prices are per minute of media.

**Bulk pricing is available for purchases of more than 20 hours; contact us for details.**

**Notes**

1. AST will endeavor to caption all content submitted to our system, but content with excessive music or noise may not be captionable by the AST system. Captioning charges only apply for successfully captioned content; failed captioning attempts do not incur caption fees. If you request a transcript, and your content is not captionable, you will receive only the transcript, and you will be billed only for the transcription portion of the fee.

2. Billing resolution is one minute; all submissions are rounded up to the next nearest minute.

3. On approval of credit, terms are Net 30. Invoices are issued monthly.

4. AST makes many caption output formats available; there are no additional charges for requesting and receiving multiple output formats for submission.

5. The turnaround time for transcription is normally less than three business days. RUSH transcription is one business day.

6. Pricing is for caption and/or transcript files for media content that has been electronically submitted to CaptionSync. Call us if you need assistance with other aspects of captioning, including digitization of analog media, audio extraction for formats not supported automatically by our website, or encoding of the final media (which may be required for some media formats).

7. You may pre-purchase time on the CaptionSync server in order to take advantage of bulk discounts. Pre-purchased CaptionSync time is non-refundable and expires five years after purchase if not used. The minimum transaction for pre-purchase is $75.

8. Prices are valid through Dec 31, 2012.

9. All prices are in US Dollars.
**Captioning software**

- YouTube Automatic Captions (web)
- Amara (web)
- Adobe Presenter

**Captioning companies**

- 3Play Media
- Amara
- CaptionSync

**Accessible Audit companies**

Hisoftware.com provides compliance auditing software.