

The Technology Accessibility Implementation Project Report to the Legislature

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Prepared by the Advisory Committee for Technology Standards for Accessibility and Usability

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Executive Summary

This document is the statutory report from the Advisory Committee for Technology Standards for Accessibility and Usability (“Advisory Committee”) as required by 16E.0475. The report is for the biennium FY12 – FY13.

In 2009, the Minnesota legislature passed, and the governor signed into law a statute and funding to advance the accessibility of State of Minnesota information technology systems used by both citizens and employees (<https://www.revisor.mn.gov/laws/?id=131&doctype=Chapter&year=2009&type=0>). The ultimate outcome is to enable citizens to be able to effectively seek and obtain information or services from the state, regardless of disability.

The implementation of the law has impacted all aspects of state information technology, from procurement and agency web and software application development, including project management, product design and development, and content creation and curation. In some cases, such as procurement, adjustment to the law has been swift. Other aspects requiring change, such as content creation and project management, have been more evolutionary.

General awareness of why accessibility is important has increased since 2009, but there is wide variation among agencies and even within agencies. In many cases, individuals or even departments just know that there are certain laws or requirements regarding accessibility, but are unsure what to do.

Fully implementing the Accessibility Standards throughout state agencies requires implementation planning, training for nearly all employees, and a cultural change that includes both an awareness of why accessibility is important and the changes in processes and skills to support that change. Without a central resource and leadership to assist agencies, agencies will likely engage in overlapping efforts, misguided efforts, or no effort at all, thereby failing to leverage the 2009 legislation and resulting four-year efforts.

The recommendations by the Advisory Committee for Technology Standards for Accessibility and Usability fall into three categories:

1. Continue funding all three programs currently managed by the Advisory Committee,
2. Update the authorizing statute for the Advisory Committee to reflect a more strategic role
3. Change to legislation regarding “Nonvisual Access”

Background

The 2009 legislature enacted [16E.03](#), calling for accessibility standards. To carry this out, the legislature funded a two-year project under the guidance of the Advisory Committee. That committee, in its 2011 report, recommended continuing the program by:

1. Continuing the Advisory Committee for Technology Standards for Accessibility and Usability (“Advisory Committee”)
2. Creating the Chief Information Accessibility Officer (CIAO) position
3. Funding an Accessibility Support Resource

The legislature agreed, supporting the proposal with an annual [transfer](#) (1st Special Session, Chapter 2, Article 2, Energy, Commerce, and Consumer Protection Finance, Section 4, Telecommunications Access Minnesota Transfers) of \$230,000 from the Technology Access Minnesota (TAM) fund.

The Advisory Committee was also charged with overseeing the progress from two other annual transfers:

- \$20,000 to the Commission of Deaf, DeafBlind, and Hard-of-Hearing Minnesotans (MCDHH)
- \$150,000 to the Legislative Coordinating Committee (LCC); \$100,000 to fund a program to caption all live streamed videos of the legislature and \$50,000 to support an accessibility grant program.

This report covers the expenditure of those funds and recommendations for future action.

Current Environment/Business Need

As government is constantly being asked to do more with less, information technology is playing a vital role in allowing government to better serve all of its citizens. Many state agencies are making their online services the primary point of contact with consumers. When a document or service is not fully accessible, it results in increased costs for both the citizen and the agency. IT consolidation has resulted in giving OET a central role in ensuring that state agencies most effectively perform their legal and operational duties with respect to accessibility. Since OET's role undergirds all agency communications and services, it is critical that OET maintains its ability to provide effective accessibility support, from outreach and training to service delivery.

Promoting the accessibility and usability of state government systems is critical to all citizens, government employees, and state agencies.

Attention to technology accessibility becomes increasingly important as the population ages. Disability statistics rise significantly by age group (37% of the population at 65-74 years, and 59% of the population at 75+ years). And as people age, they will likely require more state government services and will look online to find them.

People with disabilities are not confined to non-state employees. Of the working-age population 13.5% of people aged 18-44 years and 27.4% of those aged 45-64 years report having a disability.¹ However, those statistics are not reflected by the current population of people employed by the State of Minnesota. In 1999, over 10% of state employees reported having a disability. In 2012, that number had declined to 3.8%.² The rise of technology tools (many of which are inaccessible) in every work place is the new barrier to employment, not unlike a building without an elevator. For the state to become a better employer, it has to make the work environment more usable for people with disabilities.

Activity and Progress to Date

The start of the 2011-2013 phase of the accessibility project was delayed by the shutdown of all "nonessential" government activities. The new CIAO was not hired and placed until February 2012. It is worth noting that when the position of CIAO was proposed, it included the statement that "significant efforts would be made to recruit applicants for the Chief Information Accessibility Officer from the disability community." The resulting CIAO is congenitally deaf and personally familiar with accessibility technologies and services.

Since February 2012, the CIAO has established the Office of Accessibility as a resource for all state agencies and greatly expanded the reach of the Office's scope beyond that of the original project. This attests to the great need for information and leadership regarding accessibility.

Advisory Committee

The legislation provides specific guidelines for setting up an advisory committee. The Advisory Committee for Technology Standards for Accessibility and Usability consists of ten members

¹ <http://www.cdc.gov/ncbddd/disabilityandhealth/data.html>

² http://www.gwdc.org/policy/all_hands_on_deck.html

representing Office of Enterprise Technology, State Services for the Blind (Department of Employment and Economic Development), Department of Administration, STAR Program (Minnesota's Assistive Technology Act program), Commission of Deaf, DeafBlind, and Hard of Hearing Minnesotans (MCDHH), Department of Health, Department of Education, Department of Human Services, the Judicial Branch, and the Legislative Branch. The Advisory Committee has specific statutory responsibilities, including:

- Review processes to be used for the evaluation or certification of accessibility of technology against accessibility standards - **Ongoing**
- Review the exception process and thresholds for any deviation from the accessibility standards - **Completed**
- Identify, in consultation with state agencies serving Minnesotans with disabilities, resources for training and technical assistance for state agency staff, including instruction regarding compliance with accessibility standards - **Ongoing**
- Convene customer groups composed of individuals with disabilities to assist in implementation of accessibility standards - **Ongoing**
- Review customer comments about accessibility and usability issues collected by State Services for the Blind - **Ongoing**
- Develop proposals for funding captioning of live videoconferencing, live Webcasts, Web streaming, podcasts, and other emerging technologies - **Completed**
- Provide advice and recommendations regarding the technology accessibility program operation and objectives - **Ongoing**
- Review and make recommendations regarding individual agency accessibility plans - **Ongoing**
- Review and make recommendations regarding new or amended accessibility standards and policies - **Ongoing**
- Review and make recommendations regarding assessments of progress in implementing accessibility standards - **Ongoing**
- Consult with the chief information officer, if the chief information officer determines that any accessibility standard poses an undue burden to the state - **Ongoing**

Technology Accessibility Activity Update

Procurement/Enterprise Architecture Review

The new CIAO was placed into OET's Enterprise Architecture (EA) group. A key EA responsibility is to review all procurement requests (RFP drafts) to ensure alignment with state standards, best practice, and an overall architectural vision. As part of the prior implementation of the Accessibility Standard and procurement processes, the EA had implemented an accessibility review of all procurement requests. The CIAO took over that process. Since then, the CIAO has worked with the EA team, the OET procurement department, now known as BUY-IT, and the Department of Administration, to build evaluation standards and measurements that incorporate accessibility throughout the procurement lifecycle.

Outreach

Outreach has been two-pronged:

- Increasing awareness and implementing best practices within agencies
- Securing support of agency leadership
 - a. Awareness

Thanks to previous outreach and promotion efforts, there is general awareness among agencies of the state accessibility law and the Standard. However, most of this awareness is vague and mixed with fear, uncertainty, and doubt. Current and ongoing outreach efforts focus on providing clarity and a path forward for all agencies and their staff.

The greatest challenges to implementing effective accessibility are systems and culture. Individuals and their leadership are willing, but some systems require extensive change, and some habits and processes are so deeply embedded that it takes time to reorient toward useful accessibility.

The CIAO has presented numerous “brown bags” and to other gatherings throughout state agencies. Examples include the Department of Human Services (DHS) Managers’ conference, Education Department’s (ED) accessibility team, Administration department’s (ADM) IT team, and Pollution Control Agency’s (PCA) IT and communications teams.

- b. Securing support of agency leadership

Thanks to the support of OET Commissioner Parnell, the CIAO has presented to the Chief Information Officer (CIO) council and will be presenting to deputy commissioners. The Commissioner has also asked the CIOs to sponsor a representative to the newly established Accessibility Coordinators workgroup.

The Accessibility Coordinators, currently representing 19 agencies and OET, meets monthly to identify key issues, establish best practices and share information and resources. By March 2013, the coordinators should have a working intranet that supports communities of practice, data collection, file archiving, and related activities. This system will be available not only to representatives of executive branch agencies, but also interested representatives of cities and counties.

By summer and fall 2013, best practices will be posted on the public website both to guide state agencies and to demonstrate MN leadership in accessibility.

The Accessibility Coordinators have been valuable in assisting with outreach and communications efforts.

Website

The CIAO has taken over active management of the accessibility content of the OET website (mn.gov/oet), updating and replacing content as needed. Certain aspects of the website, such as the e-

learning program on how to create accessible Microsoft Word documents, have proven to be extremely popular. In addition to MN agencies, we know of several federal agencies and other states that reference our website.

Minnesota State Colleges & Universities (MnSCU) and University of Minnesota

The CIAO is an active participant in the MN Learning Commons Web Accessibility workgroup. This group pulls its membership from multiple MnSCU and University of Minnesota campuses. As these organizations are customers of and partners with OET, this collaboration is vital to helping ensure effective use of resources and identifying key collaboration and publishing tools and systems.

National outreach

The CIAO has either met with the leadership and/or is a regular participant in conversations with the following national organizations:

- 1) National Association of State CIOs (NASCIO)
- 2) National Association of State Technology Directors (NASTD)
- 3) U.S. Access Board (sets the Section 508 accessibility standards)
- 4) MAX Federal Community: Accessibility Community of Practice
- 5) GSA First Fridays Usability Program

The CIAO is currently in talks with both NASCIO and NASTD to present at their conferences.

Systems Change/Development

The CIAO, with support and advice from the Advisory Committee, has worked to devise and implement systems change where possible. These are just some examples of the various projects and initiatives with which the CIAO has become involved.

1. Policy(ies)

Drafted and implemented web accessibility process for OET

Encouraged other agencies to develop their own policies and supporting procedures, providing templates and feedback

Working with the OET Services team to develop policies and procedures to incorporate accessibility in service procurement and delivery

2. IP (Internet Protocol) phones

OET sells phone services to agencies and other state government entities. These phones use internet technology, requiring a complex LAN-based architecture and support system. To date, there was limited support for end-users who could not hear or see well.

The CIAO has worked with OET's telco team to discover, test, and implement compatible technologies that will be made available to blind/low vision and deaf and hard of hearing individuals within the OET customer base.

3. Health Insurance Exchange

The Minnesota Health Insurance Exchange (MnHIX) is one of the State's most ambitious and significant IT development projects ever to date. Its potential reach is to every citizen of Minnesota, as well as state government entities, private businesses, and nonprofits. Its accessibility and usability are critical components to its success.

The CIAO has identified the development team charged with HIX's user interfaces and is working with the team to develop and manage vendor expectations regarding these interfaces and related components. This includes developing appropriate design and testing programs to ensure that the vendor meets all accessibility requirements.

The CIAO is also working with the Enterprise Architect who is deeply involved in all aspects of MnHIX to ensure that the user interface team's efforts are appropriately coordinated with the rest of the MnHIX teams and programs.

4. Kiosks

Several agencies are in the business of setting up information and resource kiosks. Given the pervasive nature of kiosks in public and private environments, it would seem natural that it would be relatively easy to source fully accessible kiosks. Unfortunately, it appears that the few prototypes that have been developed are not in production. The CIAO is working with agency representatives as well as other state and national representatives to develop standards for accessible kiosks and identify potential vendor sources.

Agencies

In addition to engendering interagency collaboration through the Accessibility Coordinator workgroup, the CIAO has worked with numerous agencies to answer questions, meet with accessibility teams, and address concerns about websites, applications, vendors or projects. See the "Troubleshooting" segment, below, for more specifics.

Symposium

OET is a significant supporter of and participant in the annual GTS IT Symposium. For the past several years, there has been an "accessibility track." The CIAO was the sole or lead presenter in three sessions and also created and operated an exhibit hall booth.

Governor's office

Both the Governor's office and State Attorney General's office produce highly visible electronic content. Some of this content, notably web videos and PDF documents, have historically not been accessible. The Governor's office was very responsive to outreach, captioning their videos within 24 hours of meeting over the process.

Training

A number of state agencies develop their own classroom training materials. After learning that several agencies were developing accessibility courses independently of each other, the CIAO worked to organize an interagency group of accessibility trainers to share information and coordinate resources.

The next step is to enable agencies without training staff to take courses from the agencies that have programs to offer.

The CIAO has identified online training programs and resources produced by other states and universities that can be added to the state's portfolio of resources.

The CIAO is currently soliciting feedback on priority topics to develop online training programs to supplement the current Word program. Goal is to develop and implement at least one new program before June 2013.

Testing/Evaluation

The funding transfer included funds for a part-time "Accessibility Support Resource," which was in place when the CIAO began work. Her work was valuable in setting standards for file conversion to PDF (popular format used for Adobe Reader), researching accessibility issues with respect to application interfaces, websites, and report generation, and performing general troubleshooting tasks.

Unfortunately, the individual's services soon were no longer available to the State. The CIAO is currently evaluating options for the remainder of the fiscal year, as well as for the future.

In the meantime, the CIAO, with the Advisory Committee's support, has sought opportunities to leverage the Access-IT Master contract, particularly with respect to evaluating agency websites.

The CIAO met with Minnesota Management & Budget (MMB) over concerns regarding the accessibility of its Careers website. The Careers site is highly visible, with every MN citizen a potential user, as well as anyone else in the world. MMB agreed to allow the CIAO to contract with a qualified vendor to evaluate the site and provide any necessary recommendations for remediation. The evaluation project is expected to be completed by February 2013.

Based on the success of this activity, the Advisory Committee and CIAO are currently considering other possible websites for similar action.

Finally, the CIAO has convened a task force to evaluate and prioritize testing programs and systems. Currently, multiple agencies own their own licenses for the same testing software. One outcome of this task force is to determine which software should best be obtained and managed via enterprise-wide licensing.

Troubleshooting

Since the CIAO started work, the office has frequently been contacted to provide advice and counsel, and to troubleshoot specific situations. Topics include applicability of the Standard to certain situations or applications, how to caption videos, how to get vendors to comply with the Standard, how to

determine if a website or web page is properly accessible, how to make scanned documents accessible, and so on. Following are a sampling of the troubleshooting situations:

1. Citrix and JAWS

An agency employee who uses the JAWS screen reader to access computer applications and documents suddenly could not access networked products. It turns out that the agency had updated its Citrix system, which governs access to files and applications in a way that required the agency to install JAWS on the server side. Due to the agency's structure, resolution was complex and took the direct involvement of executive management.

2. SWIFT (statewide employee management tool)

As the statewide payroll and employee records management system operated by MMB, SWIFT is a key tool, with a high premium on accessibility. However, this has been difficult to ensure because it is made up of many parts, some of which are legacy technology. For example, SWIFT recently went through an upgrade which rendered the login page of its supplier portal completely inaccessible to non-mouse users and of limited utility to users of screen readers. The CIAO is currently working with IT staff to monitor attempts to fix this issue, among others.

3. MS Office

Most Office application users have developed their practices on their own, through years of trial and error. Yet it requires application of specific best practices in order to ensure accessible Office documents. The CIAO continues to work with agencies and departments to encourage training (including use of the free online Word program available on the mn.gov/oet website) and implementation of workflow processes that help ensure that all online documents are accessible with a minimum of effort.

4. PDF Documents

Simply converting an Office document to PDF format does not ensure accessibility. Scanned documents are even less accessible. As with MS Office, the CIAO has encouraged agencies to designate key individuals to be the sole renderers of PDF files, then ensuring that those individuals receive the proper training and tools. (A number of agencies have used LCC grant funds to take classes on PDF accessibility.) The CIAO is also working with agencies to develop document management practices that assess, for example, why they create PDF files in the first place – perhaps they can distribute the same information in a different, more easily accessible, format.

5. Multimedia

Most people understand the need to caption video for accessibility. Most do not understand that audio description is also a requirement. Moreover, not all videos need to be captioned

and/or described – that depends on how the content is created and produced. The CIAO has worked with agencies to assess their video creation processes: why does certain information need to be in a video; how can pre-production planning best account for accessibility; how to determine when you need to caption and/or describe the video; and finally, how to perform or contract for the captioning and description.

6. Reports

An often overlooked aspect of developing or deploying an application is the system's reporting process. A program or database produces a report that then gets passed on to the legislature, emailed to staff, or posted online. Yet, unless care is taken in the system's design, the report is often not accessible. This is often true when the system combines new components with legacy systems. The CIAO worked with numerous departments and agencies to help them understand the requirements for accessible reports and redefine the RFP process so that accessible reporting systems are fully accounted for.

Governance

OET, as part of its consolidation process, has built a new governance system which includes a specific component for accessibility. The design of OET's accessibility governance structure duplicates that of the Advisory Committee, and the Advisory Committee currently serves the OET governance role as well as its legislatively mandated role. It is envisioned that in the next few years, there will be an alignment between the OET accessibility governance and the legislatively established governance of accessibility.

Next Steps

Implementation of the Accessibility Standards is a process that requires planning, training, and organizational change. We acknowledge that at the conclusion of this project, June 30, 2013, the Accessibility Standards will not be fully implemented throughout state government. Creating accessible technology systems for Minnesota government will likely take years and the effort will never be completely done, as systems, technologies, and the standards themselves are always evolving. Our assumption however, is that careful planning and effective execution will result in meaningful and continuous progress to meeting the Accessibility Standards.

The remaining months of this two year effort will focus on the implementation of the Accessibility Standards in two key ways:

- **Short Term** – complete current projects and launch various new projects and tasks, including:
 - Assisting various departments/agencies with creating appropriate business and technical requirements for systems purchases
 - Maps task force on standards and best practices for creating accessible maps
 - Evaluation of accessibility testing software for enterprise-wide purchase and deployment
 - Additional testing of agency websites for accessibility issues and needs

- **Long Term** - Create tools, training, best practices, and resources that will assist agencies in their efforts to implement the Accessibility Standards

ASL Video Content and Technical Assistance

The State allocated \$20,000 per annum for the biennium to the Commission of Deaf, DeafBlind and Hard of Hearing to produce content in American Sign Language and to provide technical assistance to help the public, private and nonprofit sectors implement the law. The State of Minnesota Accessibility Standards incorporates the Web Content Access Guidelines (WCAG 2.0) at Level AA as the standard that agencies should follow, but encourages compliance at Level AAA. Level AAA requires that equivalent access is provided to the estimated 50,000 Minnesotans whose first language is American Sign Language.

During FY2012 MCDHH spent the \$15,000 allocated for ASL video content and implementation of the Usability and Accessibility Act in the following ways:

- 1) Production of a series on voting in American Sign Language through an interagency agreement with the Office of the Secretary of State and matching funds through the Help American Vote
 - [The Importance of Voting by Secretary of State Mark Ritchie](#)
 - [Get Registered](#)
 - [Get Informed, Get Involved](#)
 - [Get Out and Vote!](#)
- 2) ASL versions of unbiased information on the two proposed constitutional amendments on YouTube and TPT.

In 2013 the commission will continue to produce video content in American Sign Language and will continue to advocate for implementation of the accessibility law by serving on the Technology Accessibility Advisory Committee, serving on the Consolidated Access Fund Grants Committee and providing technical assistance to end users who need assistance creating accessible documents and videos.

Streaming Video Captioning Pilot Project

Summary

The Legislative Coordinating Commission (LCC) was first charged with conducting a pilot project to provide captioning of live streaming video of the 2010-2011 legislative sessions on the Legislature's website. This project is required in Minnesota Session Law 2009, Chapter 131, Sec 16(a) (3). The pilot project was extended for the 2012-2013 legislative sessions with funding appropriated through Minnesota Session Law 2011, 1st Special Session, Chapter 2, Article 2, Sec 4, Subd c(3). After conducting research and with consultation and input from Senate Media Services and House Public Information Services, the LCC decided to conduct a pilot project for the 2010-2011 session to test the viability of voice-writing technology for captioning the Minnesota Legislature's online broadcast.

For the 2012-2013 session, the LCC decided to expand the pilot project to further test webcast captions being provided from a remote/off-site service provider. Prior to the pilot project, captioning of the webcasting of the legislative sessions had not been offered. The objective of the pilot project in 2010-

2011 was to assess the technology of voice-writing in addition to considering accuracy, efficiency and cost. The pilot project objectives were expanded for the 2012-2013 session to see if services could effectively be provided by a remote/off-site vendor.

The LCC evaluated results of the pilot project at the conclusion of each year. The overall conclusions of the 2010-2011 phase of the pilot project were detailed in the 2012 report to the legislature. This report will summarize those conclusions and also focus on the findings of the expanded pilot project events of 2012.

Operational Summary

The LCC received three proposals in response to its RFP for voice-writing services. After reviewing the proposals, the LCC decided to not only continue testing voice-writing technology to facilitate captions but also to test the ability of voice-writing caption services being provided by a vendor from an off-site location. This expansion in the pilot project was done to address concerns about relying on one vendor. The LCC executed a contract with Tom Schultz Captioning (Schultz, contractor 1) and to contract with Aegis RapidText, Inc. (Aegis, contractor 2) to further expand vendor resources for CY 2011.

For its 2012-2013 RFP, the LCC received five proposals. After reviewing the proposals and service cost rates, contracts were awarded to Tom Schultz Captioning (Schultz, contractor 1) and Aegis RapidText, Inc. (Aegis, contractor 2). The LCC had contracted with Schultz for voice-writing captioning services for the initial 2010 pilot and decided to continue working with the contractor to provide on-site voice-writing captioning services for a portion of the Legislature's webcasts. Schultz hired one subcontractor for the 2011 and 2012 sessions.

As was the case for 2010-2011 phase of the project, the LCC continued to provide the office space and made available to Schultz the necessary hardware and software to facilitate captioning services. The LCC contracted with Aegis to provide captioning services from off-site locations but also agreed to allow the contractor to supplement its limited pool of voice-writer captioners with stenographer captioners. It should be noted that Aegis proposed an 89% increase to its hourly rate for 2012-2013 services. Final negotiations by LCC minimized the rate increase to 45%. Caption cost per hour for each service provider for 2011 and 2012 is detailed in the follow "Technical Analysis" section of this report. Aegis or its subcontractors provided the office space, hardware and software. Similar to the initial 2010 pilot phase, the House and Senate media provided the audio and video signal. Shultz captioners monitored the telecast video on the in-house TV channels and then repeated the audio they just heard into a computer loaded with the specialized software, which then converted that audio to text that was captioned on the webcast. Aegis voice-writer captioners followed a process similar to Schultz, but instead of viewing the telecast video, the captioners monitored the audio by way of a phone connection.

The caption service providers successfully captioned a majority of the content of each event of the live webcasts of House and Senate floor sessions, committee hearings, interviews with legislative leaders and members, and Capitol Reports. Any events not captioned due to technical issues were subsequently captioned for the archived webcast. The contractors captioned approximately 600-900 hours of web streaming each year. Captioners functioned similarly to legislative staff, providing services

during long evenings, and on weekends near committee deadlines and the end of session, whenever those events were broadcast or webcast.

Throughout the entire project, the LCC committed some of its staff to evaluating the accuracy of the echo captioning. LCC staff reviewed the webcast audio and compared it to the captioning provided by the contractors, literally counting discrepancies between the spoken words and the captioned text. We have found a wide range in accuracy throughout all phases of the project, from hearings where a viewer could easily follow the captioned legislative proceedings to occasions where the text was unfathomable.

Accurately capturing audio in a legislative setting remains an extremely challenging process:

- On many occasions, the audio signal is weak or muffled, making it difficult for the person repeating the audio to convert those words to text;
- Often times the speaker does not enunciate, speaks very rapidly, or is unclear in expressing their thoughts, making echoing challenging;
- In a legislative setting, there are frequently multiple people speaking at once, or rapid transitions from one speaker to the next;
- The captioner also needs to enunciate clearly, so that the voice to text software can accurately convert the audio to captioned text;
- The software can have difficulty associating the correct text for unique words such as names of testifiers or regional cities or technical terms;
- There are some words that although have similar pronunciations have different meanings such as “two” and “to” or “too”;
- Scheduling captioners can be problematic with the variability in legislative session with sometimes no defined start and end times.

Captions are provided as “closed,” where the viewer can determine and elect through their media player software and internet provider if they want the captioning to appear when provided. Although instructions on how to enable captions are provided on the House and Senate media websites, the actual process can vary depending on what media player software and version is used by the viewer.

Assessment

Because of the visible nature of the captioning service, and the level of interest by the deaf and hard of hearing community, the LCC was committed to evaluating this pilot program with an objective/technical evaluation of accuracy of the captioned text compared to the spoken words.

Technical analysis

Beyond some difficulties in schedule coordination, we experienced no other insurmountable difficulties with having captioning services provided from an off-site location as done by contractor. A greater level of communication and coordination was required with the contractor especially at the beginning of the 2011 session when the contract services first began.

LCC staff randomly selected samples of captioned audio from House and Senate floor sessions and committee hearings, and counted errors for a fixed amount of time. With enough samples, we were

able to generate an average “accuracy percentage” for the two captioning service providers. As a point of comparison, the LCC also conducted the same analysis on the contractor (Paradigm, contractor 3) used for the broadcast captioning services.

Provider	2011		2012	
	Overall Accuracy Rate	Cost/Hr for Caption Services	Overall Accuracy Rate	Cost/Hr for Caption Services
Contractor 1 (voice-writing only)	95%	\$45.47	97%	\$55.59
Contractor 2 (voice-writing only)	84%	\$45.36	91%	\$65.54
Contractor 2 (stenographer captioners only)	93%	\$45.36	86%	\$65.54
Contractor 3 (stenographer captioners only)	98%	\$95.00	99%	\$95.00

From an evaluation of the 2010 pilot LCC staff determined through a survey directed to the deaf, deafblind and hard of hearing community that a minimum accuracy rate of 94% is ideally needed in order for the caption viewer to be able to generally understand what they were witnessing. The LCC further tested this accuracy hypothesis with subjective scale rating of the randomly selected samples by staff performing the analysis. The subjective analysis confirmed that a minimum accuracy rate of 94% best serves for understanding caption content.

Next steps

- We continue to share pilot project analysis and findings with the Minnesota Commission of Deaf, Deafblind and Hard of Hearing Minnesotans and the Technology Accessibility Advisory Council.
- We plan to continue and evaluate voice to text captioning to determine if it is a viable, reliable, accurate and cost effective tool to make legislative proceedings available to Minnesota’s deaf and hard of hearing community. The Legislature needs to pursue these options if it wants to comply with the Americans with Disabilities Act and state regulations. (The Minnesota Office of Enterprise Technology has adopted these federal laws for state agencies, but they do not apply to the legislative or judicial branches. The standards are available at: http://www.state.mn.us/mn/externalDocs/OET/Accessibility_Standard_for_Minnesota_Executive_Branch_092710114823_Standard_OET000_Accessibility_090110.pdf.)
- Increase our focus on future service provider contractor plans to ensure that the captioning accurately reflects the legislative proceedings so that viewers are able to understand what they see on the webcast.
- Continue our efforts to evaluate the quality of the captioning, and provide prompt feedback to the contractors.
- Continue to weigh accuracy analysis with cost efficiency considerations.

- Work with House and Senate media to address comments regarding caption enable instructions.

Minnesota State Agencies Web Site Accessibility Grant Project

Summary

The Legislative Coordinating Commission (LCC) received appropriations from the Telecommunications Access Minnesota Fund to support captioning for webcasting of proceedings of the Minnesota Legislature (2011 1st special session, Chapter 2, Article 2, Section 4, Subd c(3).) In addition, this appropriations bill included \$50,000 for the LCC to facilitate a consolidated access fund for other state agencies. This appropriation was made available for each year of the FY 2012-2013 biennium.

After consulting with the Technology Accessibility Advisory Council (TAAC) established under Minnesota Statutes 16E.0475, it was determined that the funds were to be used to assist state agencies in making their websites compliant with Minnesota's Accessibility Standard. The technology accessibility standards, guidelines and other information can be accessed at <http://mn.gov/oet/policies-and-standards/accessibility/index.jsp>.

Operational Summary

On April 3, 2012 the LCC announced an opportunity for accessibility grant funds for state agencies through a proposal process. OET provided valuable assistance in distribution of the announcement and promotion of the program. Examples of eligible uses included, but were not limited to document remediation, captioning of agency videos, and other web content accessibility tools that state agencies could use. The LCC worked with financial management staff at MMB and the Office of Grants Management at the Department of Administration to establish a fund transfer process, grant agreement terms and forms.

At first, proposals were limited to a minimum of \$1,000 to a maximum of \$5,000, and agencies were limited to one award per fiscal year as an effort to ensure a broad range of opportunities to agencies. Subsequently, terms were changed to expand the maximum to \$10,000, and to allow agencies to submit multiple proposals to maximize grant fund utilization. Agencies were advised that grant funds would be disbursed on completion of the project and receipt of a brief report describing the finished project. The LCC consulted with TAAC on all grant opportunity terms. A grant review subcommittee of TAAC members was created to review proposals and make recommendations to the LCC although the LCC retained the responsibility to approve all grants.

Proposals were required to include:

1. A summary of the project
2. A description of the target audience
3. A description of how the grant funds will be used
4. The project's budget
5. A statement indicating why the grant funds are needed
6. A description of the project's timeline
7. Project manager and contact information

To date the LCC has received from agencies a total grant requests of \$70,389, has awarded \$53,071 (\$17,318 of grant requests are pending), and has transferred \$10,000 for completed projects. Many of

the proposals received pledged agency funds or in-kind resources to further maximize grant funds. The below table summarizes the grant proposals received.

FY	Agency	Project	Grant Award	Project Status
2012	Department of Education	Add captions to video content created prior to standard adoption	\$5,000	Completed
2013	Department of Education	Add captions to newly created video content	\$5,000	In progress
2013	Dept of Health & Human Service	PDF accessibility training for staff, train the trainer for extended staff, adobe license for training lab	\$5,000	Completed
2013	Dept of Public Safety	Accessibility document training for division/department accessibility coordinator staff	\$6,816	In progress
2013	Dept of Health	Professional assessment of website accessibility. Prioritize and migrate content. Accessibility staff training.	\$10,000	In progress
2013	Dept of Corrections	PDF accessibility training for staff. Assessment of website accessibility. Development of accessibility posting protocols.	\$9,815	In progress
2013	Dept of Education	Training for staff on eLearning modules. Website accessibility testing.	\$10,000	In progress
2013	Dept of Health & Human Services	Extend PDF accessibility training efforts with earlier award proposal	\$1,440	In progress
2013	Dept of Health & Human Services	Procurement of software to test website accessibility	\$5,268*	*Award decision pending
2013	Dept of Commerce	Professional website accessibility analysis. Technology accessibility training for staff.	\$9,800*	*Award decision pending
2013	Dept of Health & Human Services	Add captions to video content.	\$2,250*	*Award decision pending

Other agencies that have made inquiries regarding the grant project or have expressed possible interest are but have not yet submitted a proposal are:

- Department of Health
- Metropolitan Council
- MN Department of Labor and Industry
- MN Pollution Control Agency
- Office of Higher Education
- Department of Natural Resources

MN Department of Veteran Affairs
MN Board of Water and Soil Resources
North Hennepin Community College (MNSCU)

Assessment

With only two projects completed to date, our assessment of the grant project is limited. Minnesota Department of Education reports that grant funds allowed them to caption website video content. The department has put in place an open caption requirement for future video content. DHS advised that the grant funds for their PDF accessibility training project allowed them to train 40 employees that were immediately able to apply that knowledge. Staff members are able to trouble-shoot and consult on documents received, provide specific guidance on how to make documents compliant with accessibility standards, and to pass on their newly-learned knowledge.

Next steps

- The LCC will continue to work to promote awareness of the grant opportunity program with OET, TAAC and the Accessibility Coordinators group newly created by OET's Chief Information Accessibility Officer.
- We will continue to accept proposals until funds have been exhausted or the completion of FY2013.
- Final reports will be assessed and shared with the TAAC subcommittee members.

Recommendations to the Legislature

Support for Live Streaming Captioning of Legislature

In its 2011 report, the Advisory Committee recommended that the legislature create a permanent consolidated access fund for the purpose covering the costs of live captioning, and that this fund be made available to all branches of state government. This recommendation was made in light of two significant events:

- In the fall of 2009 the Department of Justice (DOJ) proposed changes to the ADA that will require websites to provide captions online. The DOJ is currently reviewing public comments on the issue.
- In 2010 President Obama signed the 21st Century Communications and Video Accessibility Act of 2010, which requires online video programming to be captioned.

Until such a permanent solution is established, the Advisory Committee recommends that the LCC continue captioning all live streaming of the legislature. To that end, it recommends that \$100,000 of TAM monies again be allocated to fund the cost of providing captions for all live streaming video of the legislature.

Support for Accessibility Grant Funding

Agencies continue to struggle with effectively supporting the state accessibility requirements. The most critical need is for staff training, especially training in:

- How to make accessible PDF documents
- How to make accessible Microsoft Word documents
- How to create accessible web pages and sites
- How to test documents and websites for accessibility and identify needed fixes.

In addition to training, the Advisory Committee sees an increased demand in the need for captioning and describing video as well as remediating existing online documents so that they can be accessible.

For these reasons, the Advisory Committee recommends that the legislature continue to allocate \$50,000 annually from the TAM fund to the LCC to provide grants to state agencies for developing their accessibility support resources.

Funding and Legislation that Support Technology Accessibility Going Forward

As stated earlier in this report, implementation of the Accessibility Standards is a process that requires planning, training, and organizational change. When this project started, it already had in place:

- The Accessibility Standard (attached)
- Procurement guidelines and practices within both ADM and OET's ISRM (now BUY-IT)
- Web content
- Accessible MS Word training program
- A general level of awareness among many state IT employees

At the conclusion of this project, June 30, 2013, the project will have accomplished, among other activities:

- Formation and operation of inter-agency Accessibility Coordinators workgroup (ongoing)
- Formation and operation of inter-agency accessibility trainers workgroup (ongoing)
- Development and implementation of statewide intranet supporting multiple accessibility-related communities of practice (ongoing)
- Definition and implementation of accessibility best practices for document creation, website and application development, and related activities (ongoing)
- Coordination of accessibility standards and practices within the consolidated buying operations of BUY-IT (completed)
- Coordination of accessibility standards and practices within state procurement (ongoing)
- Implementation of Accessibility Policies and operations within multiple agencies, including OET (ongoing)
- Testing and evaluation of key web sites and applications (ongoing)
- Implementation of accessibility practices within all OET Services creation and delivery (ongoing)
- Defining and monitoring MnHIX interface accessibility and usability (ongoing)
- Analysis and troubleshooting of agency issues (ongoing)

We believe that without dedicated support for the accessibility effort during the early stages of implementation, the original intent of the legislation will not be realized. Fully implementing the Accessibility Standards throughout state agencies requires implementation planning, training for nearly all employees, and a cultural change that includes both an awareness of why accessibility is important and the changes in processes and skills to support that change. Without a central resource and leadership to assist agencies, agencies will likely engage in overlapping efforts, misguided efforts, or no effort at all, thereby failing to leverage the 2009 legislation and resulting four-year efforts.

Moreover, the program has statewide impact, affecting more than just executive branch agencies.

In order to achieve sustainable, measurable progress in the accessibility of State of Minnesota IT systems and applications, The Advisory Committee for Technology Standards for Accessibility and Usability recommends:

- 1) Continue the Advisory Committee for Technology Standards for Accessibility and Usability (draft legislation attached)
 - a) Remove the sunset clause from the Advisory Committee’s authorizing statute
 - b) Retain the current membership structure
 - c) Add up to two members who represent the disability community
 - d) Update charter to reflect a more strategic role
 - e) Available to review activities and advise OET and Admin
- 2) Continue to provide sufficient funds to support OET’s Office of Accessibility to ensure:
 - a) Strong OET accessibility presence throughout state agencies
 - b) Support for outreach, education, training, advice, information
 - c) Support for technology accessibility evaluation, recommendations, and best practices
 - d) Consultation with agencies and development teams regarding accessibility technologies and best practices
 - e) Accountability for coordination of key components – architecture, procurement; including changes resulting from updates to standards
 - f) Driving innovation and opportunities to increase accessibility and improve efficiencies while lowering overall costs.
 - g) Fund key initiatives and projects

To support these recommendations, the Advisory Committee recommends that the legislature allocate \$290,000 annually from the TAM funds to cover cost of operations.

Change to Existing Legislation

In 1998, the legislature enacted the “NonVisual Access Standards” now codified at Minnesota Statutes, section 16C.145. The language instructs that standards be included, “in all contracts for the procurement of information technology, by, or for the use of, agencies, political subdivisions, and the Minnesota State Colleges and Universities.” The statute also provides that, “the University of Minnesota is encouraged to consider similar standards.”

The statute requires that the following minimum specifications must be included as part of the standards:

1. that effective, interactive control and use of the technology including the operating system, applications programs, prompts, and format of the data presented, are readily achievable by nonvisual means;
2. that the nonvisual access technology must be compatible with information technology used by other individuals with whom the blind or visually impaired individual must interact;
3. that nonvisual access technology must be integrated into networks used to share communications among employees, program participants, and the public; and
4. that the nonvisual access technology must have the capability of providing equivalent access by nonvisual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired.

The Advisory Committee discussed this existing legislation and believes that the broad principles articulated in the statute are encompassed and better defined in the new standards adopted in Minnesota on September 1, 2010. The current Minnesota Accessibility Standard is much more specific and defined in lay terms which is beneficial to the intended audience and promotes compliance. Since both standards are currently in force in the Executive Branch, both are referenced in RFPs and contracts. This causes confusion among State employees, contractors, and vendors.

Therefore, the Advisory Committee recommends that the NonVisual Access Standards be modified to state that where the Minnesota Accessibility Standard is required, it supersedes the NonVisual Access Standards, and all language regarding the NonVisual Access Standard may be removed from relevant contracts.

Regarding non-Executive branch organizations, the NonVisual Access Standards remains a minimum requirement until any such organization chooses to adopt the Minnesota State Accessibility Standard. In such cases, the Advisory Committee recommends that again, the State Standard shall supersede the NonVisual Access Standard.

The recommended statutory language is attached.

Advisory Committee for Technology Standards for Accessibility and Usability

Name	Agency
David Andrews, Advisory Committee Chair	State Services for the Blind (DEED)
Kim Wee	Education
Diane Henry-Wangenstein	Legislative Branch
Mary Hartnett	Commission of Deaf, DeafBlind, and Hard of Hearing Minnesotans
Justin Kaufman	Administration
Eric Faulk	Human Services
Jay Wyant	Office of Enterprise Technology
John Kostouros	Judicial Branch
Cindy Le	Health
Kim Moccia	STAR Program