

# The Technology Accessibility Implementation Project Report to the Legislature

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*January 17, 2012*

Prepared by the Advisory Committee for Technology Standards for Accessibility and Usability  
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## Executive Summary

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.

The implementation of the law has and will continue to affect state information technology procurement and agency web and software application development. The accessibility of state information technology systems will significantly impact citizens seeking information or services from the state, regardless of disability.

In 2011, the Minnesota legislature passed, and the governor signed into law a statute and funding to continue efforts to fully implement the Accessibility Standards adopted September 1, 2010.

This report provides an overview of activities and accomplishments since the last Technology Accessibility Legislative Report (January 15, 2011) and presents high level plans for the remainder of the biennium.

## Overview of Accessibility Law

The 2009 technology accessibility legislation provided specific direction and funding to multiple entities. Key components of the legislation include:

- Requirement that the State CIO adopt standards that “incorporate Section 508 of the Rehabilitation Act, United States Code”, and “the Web Content Accessibility Guidelines 2.0,” unless any standard poses an undue burden to the state.
- Requirement that the Office of Enterprise Technology (OET) implement the adopted standards including working with the Department of Administration to help the state purchase accessible hardware, software, and online applications.
- Creation of the Advisory Committee for Technology Standards for Accessibility and Usability to assist OET
- Establishment of a pilot program to provide captioning of live streaming of legislative, led by the Legislative Coordinating Commission (LCC)
- Creation of videos and training related to captioning by the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans

The 2011 technology accessibility legislation continues the accessibility efforts by providing funding to the Office of Enterprise Technology, Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans, and the Legislative Coordinating Commission. Key components of the legislation include:

- Continuation of the Advisory Committee for Technology Standards for Accessibility and Usability to assist OET
- Funding for OET to support the advisory committee and to fund resources dedicated to further implementation of accessibility across the executive branch
- Funding to the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans to provide information on their web site in American Sign Language, and to provide technical assistance to state agencies

- Funding to the LCC to provide captioning of live streaming of legislative activity on the commission's web site and for a consolidated access fund for other state agencies.

### **Activity since the January 15, 2011 Legislative Report**

Significant progress has been made in achieving the objectives set forth in the 2009 legislation.

1. Launch of OET Accessibility web page that includes online training and a wealth of other resources
2. Over 25 sessions of training for state employees offered at no charge on topics such as
  - How to create accessible Word documents
  - How to create accessible PDF's
  - How to create accessible web sites
  - How to provide and create closed captioning for videos and other media
3. Transition of accessibility-related activities to appropriate operational groups with OET and the Department of Administration

## Current Environment

The evolving state of information technology reflects and enables the way that Minnesota state government serves the public. Taking advantage of continuously changing technology, state government is increasing its use of technology to offer citizens a host of online and/or electronic services. These services may include corresponding with elected officials, providing information about government services, renewing licenses, providing tax information and filing returns, and applying for jobs or benefits.

Likewise, state government employees increasingly depend on information technology to support state government services. Employees use technology to manage email, documents, and schedules. Software applications may be used by all employees (e.g., the HR/payroll system), a significant number of employees (e.g., the procurement/accounting application), or may be agency or role specific (e.g., a case management application). The use of information technology doesn't end with software applications. Printers, copiers, LCD projectors, training webinars, and even voice over internet protocol (VOIP) telephones are widely used and connected to the information technology infrastructure.

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

## Background

In 2007, a small group of agencies initiated discussions regarding ongoing issues with hardware, software, and online applications within state government making them inaccessible to individuals with a disability. These agencies included State Services for the Blind, the Minnesota STAR Program (STAR=System of Technology to Achieve Results), and the Commission of Deaf, Deafblind and Hard of Hearing Minnesotans ("Commission"). The group later expanded to include other disability-related state agencies, other agencies that had an interest in improving accessibility, and legislative staff. Administration Commissioner Dana Badgerow agreed to formalize and champion an interagency team of nineteen founding members focused on improving the accessibility and usability of Minnesota E-Government Services.

In 2009 Senator Ann Rest and Representative Bill Hilty introduced legislation to establish accessibility standards. The legislation passed with minimal opposition and was signed into law by Governor Pawlenty in May, 2009.

The Office of Enterprise Technology launched the Technology Accessibility Standards Implementation project in response to a new law (2009 Minnesota Laws, Chapter 131). The purpose of the project was to define and implement standards and supporting processes that improve equal access to the State of Minnesota's services delivered through information technology. According to the legislation, the standards developed by the chief information officer "must incorporate Section 508 of the Rehabilitation Act, United States Code", and "the Web Content Accessibility Guidelines 2.0," unless any standard poses an undue burden to the state. The legislation provides that an "undue burden" means "significant difficulty or expense determined and documented by the funding agency, including but not limited to difficulty or expense associated with technical feasibility." (2009 Minnesota Laws, Chapter 131, Section 10, Subdivision 9)

The federal Section 508 standards cover the full range of electronic and information technologies, including those used for communication, duplication, computing, storage, presentation, control, transport and production. This includes computers, software, networks, peripherals and other types of electronic office equipment. The Web Content Accessibility Guidelines 2.0 (WCAG 2.0) is part of the international standards and best practices for accessibility and usability recommended for web developers by the World Wide Web Consortium.

To implement the new law, OET created a project to support its statutory mandate to lead in managing technology accessibility standards and establish the processes needed to put them into effect. Further, the project worked with both OET's Information Technology Standards and Resource Management Division (ISRM) and the Department of Administration's Materials Management Division (MMD) to help the state purchase accessible hardware, software, and online applications under Minnesota Statutes 2008, Chapter 16C.

The scope of the project was to develop and implement the standards and processes necessary to enhance end user accessibility to State of Minnesota information technology systems and delivery of services utilizing information technology systems. The final outcome of this project, which ended on June 30, 2011, benefits both citizens and state employees.

In its 2011 report to the Legislature, the Advisory Committee for Technology Standards for Accessibility and Usability recommended continuing funding into the next biennium to continue and expand accessibility implementation activities. Many of these recommendations were implemented by the legislature and signed into law by Governor Dayton.

## **Summary of the Legislation**

The legislation provides specific guidelines for continuing a technology accessibility advisory committee to advise OET in their ongoing accessibility efforts. The Advisory Committee for Technology Standards for Accessibility and Usability consists of ten members representing Office of Enterprise Technology, State Services for the Blind (Department of Employment and Economic Development), Department of Administration, STAR Program, Commission of Deaf, DeafBlind, and Hard of Hearing Minnesotans, 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
- Review the exception process and thresholds for any deviation from the accessibility standard
- 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
- Convene customer groups composed of individuals with disabilities to assist in implementation of accessibility standards
- Review customer comments about accessibility and usability issues collected by State Services for the Blind

- Develop proposals for funding captioning of live videoconferencing, live webcasts, web streaming, podcasts, and other emerging technologies
- Provide advice and recommendations regarding the technology accessibility program operation and objectives
- Review and make recommendations regarding individual agency accessibility plan
- Review and make recommendations regarding new or amended accessibility standards and policies
- Review and make recommendations regarding assessments of progress in implementing accessibility standards
- Consult with the State chief information officer, if the State chief information officer determines that any accessibility standard poses an undue burden to the state
- Report to the chairs and ranking minority members of the legislative committees with jurisdiction over state technology systems by January 15 each year regarding the findings, progress, and recommendations made by the advisory committee

The two year effort (scheduled to sunset June 30, 2013) provides funding to:

- The Office of Enterprise Technology (\$230,000 each year) for coordinating technology accessibility and usability
- The Commission of Deaf, DeafBlind, and Hard of Hearing Minnesotans (\$20,000 each year) to provide information on their web site in American Sign Language and to provide technical assistance related to captioning to state agencies
- The Legislative Coordinating Commission (\$150,000 each year) to provide captioning of live streaming of legislative sessions on the commission's web site and for a consolidated access fund for other state agencies

The funding source for the two year accessibility effort is the Telecommunications Access Minnesota (TAM) Fund.

As required by Statute, the Committee for Technology Standards for Accessibility and Usability is to report to the legislature by January 15, 2012 on the findings, progress, and recommendations of technology accessibility efforts described in the above paragraphs. Therefore, the purpose of this required legislative report is to:

- Provide an update on all technology accessibility efforts that have occurred since the last report to the legislature on January 15, 2011
- Propose funding options for captioning of live videoconferencing, live webcasts, web streaming, podcasts and other emerging technologies
- Propose legislation and funding options that support technology accessibility efforts going forward

## Technology Accessibility Activity Update

### Report on Office Technology and Department of Administration Activity, January through June 2011

Implementation of the Accessibility Standards is a process that requires planning, training, and organizational change. Therefore, the last six months of the project focused on providing training to technical staff, procurement staff, and end users; launching a web site with key resources, and ensuring that accessibility was appropriately built into the operational processes of the Office of Enterprise Technology and the Department of Administration.

#### *IT Procurement*

By the end of December 2010, State of Minnesota procurement processes were modified to include the Technology Accessibility Standards adopted into the State Enterprise Architecture. This was a significant effort that touched on all levels of both professional/technical and acquisition processes and tools. This effort included defining an exception process that was vetted and approved by the Advisory Committee for Technology Standards for Accessibility and Usability.

In order to roll out the new processes and tools, the Materials Management Division created instructor-led training that was delivered to agency professional/technical contracting staff and Materials Management Division internal professional/technical contracting and acquisitions staff. In all, 65 agency staff and 17 Materials Management Division staff were trained.

The accessibility training materials were then incorporated into the agency contracting staff training that is delivered on a regular basis assuring that new contracting staff is aware of and competent in state procurement policies and processes.

The Procurement Team also created the ACCESS-IT Master contract which provides easy access to captioning, document remediation and accessibility training services.

#### *IT and End User Training*

Instructor-led classes were developed or identified for web/application development teams and for end-users. During April through June, 2011 over 25 sessions (approximately 450 enrollees) of the following types of training were offered to agencies at no charge:

- How to create accessible Word documents
- How to create accessible PDF's
- How to create accessible web sites
- How to provide and create closed captioning for videos and other media

In order to address training needs beyond June 30, 2011, the Office of Enterprise Technology and the Commission of Deaf, DeafBlind, and Hard of Hearing Minnesotans collaborated to create three online training tools. The Electronic Curb-Cut video, the WCAG 2.0 webinar, and the Using Microsoft 2010 to Create Accessibility Word Documents computer-based training, along with the Captioning Essentials course created by the Commission essentially provided the same information as three of the instructor-led courses. These training tools are all available on the OET Accessibility web page.



In addition to training developed by the Technology Accessibility Standards Implementation project, accessibility training is available through the ACCESS-IT Master Contract, and through links to selected resources on the OET website.

### *ACCESS-IT Web Page*

The Office of Enterprise Technology launched an Accessibility web page on its web site that includes the Accessibility Standards and implementation materials, including tools, training, and resources. Having a single place where all information related to the Accessibility Standards can be found, is key to the long term implementation of the standards.

### *Implementation Planning*

Creating a culture where the need for accessibility is individually and collectively understood and where processes and tools are modified to ensure progress to accessible technology, requires planning. An implementation guide and planning templates were created to assist organizations in accessibility implementation planning. The Accessibility Implementation Guide walks agencies through a decision making process to identify roles and responsibilities, training needs, and goals and metrics that demonstrate progress. In addition to the guide, the implementation toolset includes an implementation plan template and sample communication and training plans.

### *Transition to Operations*

A key objective of the Technology Accessibility Standards Implementation Project was to build accessibility into current processes whenever possible, rather than create new and separate activities for accessibility. Project communications often referred to this effort as “weaving accessibility into the fabric of IT”.

Additionally, the project took every opportunity to place responsibility for IT accessibility in an enterprise or centralized office within OET and the Department of Administration. Some of the benefits of this approach include:

- Limited accountability which is easier to monitor, measure, and refine
- Less training and reduced opportunity for omitting accessibility from technology
- Ownership for project deliverables once the project was completed
- Defined roles and responsibilities that are responsible for maintaining and improving project deliverables

In other words, the project leadership made a significant effort to assure that the accessibility implementation will continue once the project ended. However, development activities, including applications, websites, multi-media, and content occurs throughout state government within each agency. It was not possible to centralize the responsibility for accessibility for these activities.

However, by adopting the standards into the technical enterprise architecture, accessibility is positioned to influence these agency IT development activities. The process of adopting the standards went through several months of vetting by various subject matter expert groups and levels of governance with representation from most agencies. To address development activities beyond the project, agency implementation materials, training, tools, and guidance were developed to help agencies build in accessibility into their own processes and culture. This material is available on the OET website.

The following table describes the key deliverables of the Accessibility Standards Implementation Project and who owns those deliverables going forward, beginning July 1, 2011. It also provides a summary list of what the project produced to support implementation by those owners.

<b>Key Components/ Activities</b>	<b>Ownership</b>	<b>Responsibilities</b>	<b>Related Project Deliverables</b>
Accessibility Standards	(Central Office) Office of Enterprise Technology – Enterprise Architecture Office	<ul style="list-style-type: none"> <li>• Maintain standards</li> <li>• Advise agencies</li> <li>• Set policy</li> <li>• Review exceptions</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility Standards</li> <li>• Exception process – internal developmt</li> </ul>
IT Procurement	(Central Office) Department of Administration – Materials Management Division	<ul style="list-style-type: none"> <li>• Maintain processes and templates</li> <li>• Advise/train</li> <li>• Work with vendors</li> <li>• Provide oversight</li> <li>• Review contract exceptions</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility Toolkit</li> <li>• Accessibility Matrix</li> <li>• Revised processes and procurement templates</li> </ul>
IT Master Contracts – Standards Based Purchasing	(Central Office) Office of Enterprise Technology – IT Standards and Resource Management Office and Administration – MMD	<ul style="list-style-type: none"> <li>• Maintain processes</li> <li>• Advise agencies</li> <li>• Ensure accessibility standards are applied</li> <li>• Work with vendors</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility Standards</li> <li>• Revised processes</li> </ul>
Web Site Development	(Distributed) Individual Agencies	<ul style="list-style-type: none"> <li>• Create and maintain accessible web site</li> <li>• Approved exceptions for websites or components that don't meet the Accessibility Standard</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility Standards</li> <li>• Exception process</li> <li>• OET Accessibility web page – tools, guidance, training</li> </ul>
Application Development (both web and client-server applications)	(Distributed) Individual Agencies	<ul style="list-style-type: none"> <li>• Create and maintain accessible web site</li> <li>• Approved exceptions for components that don't meet the Accessibility Standard</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility Standards</li> <li>• Exception process</li> <li>• OET Accessibility web page – tools, guidance, training</li> </ul>
Content creation – including web content, multi-media, electronic documents	(Distributed) Individual Agencies	<ul style="list-style-type: none"> <li>• Create and maintain accessible web site</li> <li>• Approved exceptions for components that don't meet the Accessibility Standard</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility Standards</li> <li>• Exception process</li> <li>• OET Accessibility web page – tools, guidance, training</li> </ul>

The Technology Accessibility Standards Implementation project built a foundation for technology accessibility. Through the appropriate adoption of standards, and the development of processes, tools, training, and guidance, the implementation of technology accessibility can progress at a rapid and consistent pace.

## **FY12 Accessibility Activities to Date**

The following are highlights from activity in FY2012:

- As defined in the preceding table, Accessibility is part of daily Office of Enterprise and Department of Administration procurement and standards processes and approvals. Since launching these processes at the end of December 2010, only one undue burden exception request and one request based on the back office exception have been received.
- The biggest challenge to successfully implementing accessibility across the executive branch is related to the web and application development and end user content development activities within agencies and outside of central office operations. To that end, it is likely that the legislation that established IT consolidation will also have a significant positive impact on accessibility implementation as web and application development activities will be within the authority of the Office of Technology.
- The 2011 Technology Accessibility legislation that provides funding to the Office of Enterprise Technology anticipated the creation of one or more positions to continue working with agencies on accessibility implementation. With the new lens of IT consolidation the accessibility role was redefined to provide both technical expertise in the web and application development and standards area of enterprise architecture as well as continue to provide end-user and IT training. The applicant interview process for this position is currently underway.
- Because agencies continue to have questions about how to implement the Accessibility Standards, an interagency agreement is being established with the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans to provide a resource to answer questions and evaluate documents and applications. This will supplement the expertise within the existing Enterprise Architecture and the Standards groups.
- Finally, the Advisory Committee for Technology Standards for Accessibility and Usability has been launched and has met twice, November 9, 2011 and January 11, 2012.

## **ASL Video Content and Technical Assistance**

### **Report Content Prepared by Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans (MNCDHH)**

The State allocated \$100,000 in 2011 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 FY2011 MCDHH spent the \$100,000 allocated for ASL video content and implementation of the Usability and Accessibility Act in the following ways:

1. Production of a video tour of the capitol for people with disabilities in American Sign Language that will be posted with a link on the Accessibility section of the Legislative Website.
2. Production in collaboration with the Office of Enterprise Technology of the following:
  - a. "The Electronic Curb Cut", an educational video that explains the new accessibility law, why it's important and the role everyone plays in implementing the law. It was made so that individuals, the public, private and nonprofit sectors could benefit from viewing it
  - b. "Using Microsoft Word 2010 to Create Accessible Documents" is a six part course that is available to the state and the public that covers the following topics:
    - Module 1: Introduction to Accessibility
    - Module 2: Formatting a Document
    - Module 3: Formatting Tables
    - Module 4: Creating Hyperlinks
    - Module 5: Formatting Images, Charts and Graphs
    - Module 6: Creating Accessible Forms
  - c. WCAG 2.0 Top Ten Check Points webinar Understanding the Web Content Accessibility Guidelines (WCAG 2.0), why and when the guidelines are important, and how to apply them is addressed in the WCAG 2.0 Top Ten Check Points webinar. This webinar provides an introduction to WCAG 2.0 for web application developers and business analysts.

In 2012 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**

### **Report Content Prepared by Legislative Coordinating Commission**

#### **Summary**

The Legislative Coordinating Commission (LCC) was 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). 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 to test the viability of voice-writing technology for captioning the Minnesota Legislature's online broadcast. Prior to the pilot project, captioning of the webcasting of the legislative sessions had not been offered. The objective of the pilot project was to assess the technology of voice-writing in addition to considering accuracy, efficiency and cost.

The pilot project was divided into two phases with the first phase occurring during the 2010 legislative session and the second phase occurring during the 2011 legislative session. The LCC committed to evaluating results at the conclusion of each phase. The 2010 pilot phase finding was summarized in the January 2011 report presented to the Minnesota Legislature. This report will focus on the 2011 pilot phase and overall conclusions of the two-year pilot project.

## 2011 pilot

### *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. The LCC executed a contract with Tom Schultz Captioning (Schultz, contractor 1) and with Aegis RapidText, Inc. (Aegis, contractor 2). The LCC had contracted with Schultz for voice-writing captioning services for the 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 2011 webcasts. Schultz hired one subcontractor. The LCC provided 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. Aegis or its subcontractors provided the office space, hardware and software. Similar to the 2010 pilot, the House and Senate media provided the audio and video signal. Schultz 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 webcasts of House and Senate floor sessions, committee hearings, interviews with legislative leaders and members, and Capitol Reports. In all, the contractors captioned approximately 1,200 hours of web streaming. Captioners functioned similarly to legislative staff, providing services during long evenings, and on weekends near committee deadlines and the end of session.

Throughout the pilot 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. As with the 2010 pilot, we found a wide range in accuracy for the 2011 pilot, 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.

For the 2011 project, captions were 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.

**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. Our plans are to assess the pilot in two ways: an objective/technical evaluation of accuracy of the captioned text compared to the spoken words; and a survey of deaf and hard of hearing citizens about their experience with the captioning, including an evaluation of sample voice to text captioning. The objective/technical accuracy analysis is complete, however at the time of the drafting this report, the survey analysis is not yet finalized.

**Technical analysis**

No insurmountable difficulties with having captioning services provided from an off-site location were experienced as done by contractor 2, although a greater level of communication and coordination was required with the contractor especially at the beginning of the 2011 pilot.

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, the LCC was able to generate 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.

<b>Provider</b>	<b>Overall Accuracy Rate</b>	<b>Cost/Hr for Caption Services</b>
Contractor 1 (voice-writing only)	95%	\$45.47
Contractor 2 (voice-writing only)	84%	\$45.36
Contractor 2 (stenographer captioners only)	93%	\$45.36
Contractor 3 (stenographer captioners only)	98%	\$95.00

From 2010 pilot discussion, LCC staff determined 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 will be further testing this minimum accuracy hypothesis through a survey directed toward the deaf, deafblind and hard of hearing community with the assistance of the Minnesota Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans (MCDHH). MCDHH will email a letter of invite to participate in the survey to their distribution list of approximately 700 individuals.

### *Next steps*

- Confer with staff of the Minnesota Commission of Deaf, Deafblind and Hard of Hearing Minnesotans after the analysis of the survey results is completed.
- 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](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.

## **Advisory Committee for Technology Standards for Accessibility and Usability**

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