

JANUARY 2021  
DDS ASSISTIVE  
TECHNOLOGY  
NEWSLETTER

BRAILLE  
IN THE  
DIGITAL  
AGE

ISSUE #3

## **Editor's Letter**

*We have made this month's DDS assistive technology newsletter an accessible document. Moving forward all our newsletters will be accessible.*

*What makes documents accessible?*

*Accessible documents allow people with low vision and other disabilities to use special software and devices, including screen readers, to access computers and reading materials. Using simple design principles when creating a word document ensures that everyone can access them. It is important that we give all our visitors the opportunity to access and navigate through our newsletter.*

For more information please contact: Amy Blazawski [amy.blazawski@ct.gov](mailto:amy.blazawski@ct.gov)  
or Patricia Cymbala [patricia.cymbala@ct.gov](mailto:patricia.cymbala@ct.gov)

## *Announcements and Opportunities*

The Arc of Connecticut and MidState Arc and other qualified providers are working on The Communication and Connectedness Crisis Fund for People with Intellectual and Developmental Disabilities (I/DD). In this project, we seek to ensure that people with intellectual and developmental disabilities stay connected to their families, caregivers, medical professionals, and support staff during the current COVID-19 crisis and beyond. **The goal** of the fund is to identify and assess the needs of this target sector across CT and then for each town/area/provider to provide the funding to put in place the technologies and telecommunication services needed to keep people socially connected at a time when social distancing is the norm.

Arc CT has received funding from the CT Council on Developmental Disabilities to conduct a survey to identify people with IDD who cannot connect virtually during this time. If you are interested in participating in the survey, please reach out to Win Evarts [wevarts@thearcct.org](mailto:wevarts@thearcct.org). Throughout the state, providers are working on obtaining grant funding for their area to support the needs identified in this project. MidState Arc has recently received funding for equipment/software and assessments for the Meriden Wallingford Area. We are hoping to receive funding for connectivity by mid-December. If people are interested in being included in this project, please connect with Pam Fields at MidState [pfields@midstatearc.org](mailto:pfields@midstatearc.org). She will inform you if there are providers in your area working on this project; what to do if, as a provider, you would like to participate, and if there is possible funding available.

## THE HISTORY OF BRAILLE

BY YANA RAZUMNAYA, DDS SELF ADVOCATE COORDINATOR

Believe it or not, Braille (in its earliest form) was not originally designed for people with vision loss. The history of braille goes all the way back to the early 1800s when a man named Charles Barbier, who served in Napoleon's French army developed a system called night-writing. He developed this system so that soldiers could communicate safely during the night. As a military veteran, Barbier saw many soldiers killed because they used lamps to be able to read combat messages after dark. As a result, the enemy could see where the French soldiers were, and this led to the loss of many men. Barbier based his night-writing system on a raised 12 dot cell; two dots wide and six dots tall. Each Dot or combination of dots represented a letter or a phonetic sound.

There was a problem with this system though, human fingertips could not feel all the dots with one touch. Luckily that's where Louis Braille entered the picture. Before we meet Louis Braille though, there

is another person that entered the picture much earlier that is worth mentioning. His name was Valentin Haüy and he was the founder of the National Institute for The Blind in France. The same school that Louis would attend later. In 1786, Haüy devised a printing system that could be read with the fingertips. He used ordinary printing type, cast in reverse, pressing it against the back of the paper to create embossed Roman letters. The system was improved in 1816 by Haüy's successor at the Paris school, Sébastien Guillié, who devised a more open design of the round-hand type<sup>1</sup>. While Haüy had used a copperplate press, Guillié used a common printing press with two people pulling on the bar to create the additional pressure needed to emboss paper<sup>2</sup>. This was the system used by the blind until Braille entered the scene. Louis Braille was born in the village of Coupvray, France on January 4, 1809. At age 3, playing in his father's workroom, Louis injured his eye with an awl. Infection

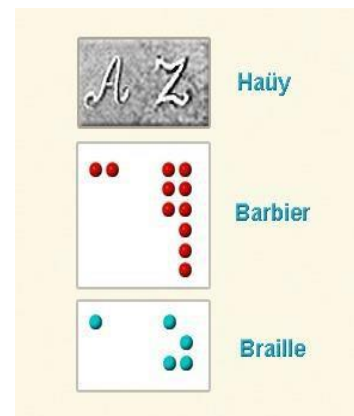


Figure 1 A comparison of three methods of printing for the blind in the nineteenth century. "A" and "Z" are printed in the embossed lettering favored by Valentin Haüy; in the "night writing" military code of Charles Barbier; and the modern English version of braille code by Louis Braille.

Photo Source: By Steve Strummer - Own work, CC0,

<https://commons.wikimedia.org/w/index.php?curid=31282350>

later blinded him in both eyes, but his parents sent him to a regular school where he excelled due to his good memory. At age 10, he earned a scholarship to France's National Institute of Blind Youth. It was here that Louis learned about Barbier's night-writing system and decided to adapt the system to replace the awkward embossed letters that blind people used to read. He started his work in 1824 at the age of 15 and published his system at age 20 in 1829.

## THE HISTORY OF BRAILLE (CONTINUED)



**Figure 2 Louis Braille.**

**Photo source: Royal School for the blind**

Despite acclaim from his fellow blind students and even King Louis Phillipe, the system was rejected by some sighted teachers and school board members. They feared that blind people would take away their jobs teaching blind kids. For a while, blind students were forced to study braille on their own due to skepticism from the public. Even the Institute for the Blind, where Braille was a teacher, Braille was not in the curriculum until 1854. Louis Braille died of tuberculosis on January 6, 1852 at the institute in Paris. On the 100<sup>th</sup> anniversary of his death in 1952, Louis Braille's grave was moved

to the Pantheon, where France's national heroes are buried. His hands however are still buried in his hometown of Coupvray as a tribute to his system of touch reading.

In 1860, Braille made its way to the United States where it was adopted by the Missouri School for the Blind in St. Louis<sup>3</sup>.

American braille was invented by Joel Smith, a piano tuning teacher at Perkins Institute for The Blind in Boston in 1878. At the time, it was a more efficient system that was faster to read and write than other forms of embossed type<sup>4</sup>. This was the braille system that was used by Helen Keller.

Today the specific code used in the United States has been English Braille, American Edition but as of 2016 the main code for reading material is Unified English Braille, a code used in seven other English- speaking countries<sup>5</sup>. In the 21<sup>st</sup> century, braille is no longer limited to textured pieces of paper. Thanks to assistive technology, there are many options for

people who are blind to be able to read, write and use a computer with ease. As early as 1989 The Braille Navigator gave people with low vision access to MS-DOS computers. Once connected to the computer, the navigator could act both as a keyboard and a mouse<sup>6</sup>. Braille displays which are typically placed below a keyboard, make it possible to use Braille to read the content on a computer monitor. They utilize small pins that move underneath a person's fingertips as the program communicates the information line by line. Today the Braille Note is a very popular Braille notetaker and tablet. For more on the Braille note device please visit <https://www.nfb.org/blog/braille-note-touch-braille-notetaker-how-does-it-stack>

The CT Library for The Blind and Physically Handicapped, is a network library of the Library of Congress' National Library Service for the Blind and Physically Handicapped. They lend books and magazines in recorded formats along with the

## THE HISTORY OF BRAILLE (CONTINUED)

necessary playback equipment, and materials in braille, FOR FREE, to any Connecticut adult or child who is unable to read a regular print due to a visual or physical disability. Please go to <https://ctstatelibrary.org/lbph> for more information about this wonderful local resource.

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<sup>1</sup> "Books for the Blind." Perkins School for the Blind, <https://www.perkins.org/history/legacy/books-for-the-blind>.

<sup>2</sup> "Books for the Blind." Perkins School for the Blind, <https://www.perkins.org/history/legacy/books-for-the-blind>.

<sup>3</sup> "The History of Braille [Your Braille Resource]." Braille Works, <https://brailleworks.com/braille-resources/history-of-braille>

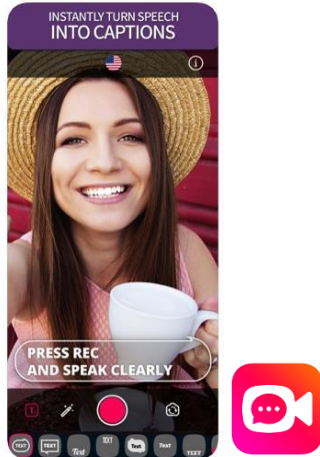
<sup>4</sup> "Figures in Perkins History." Perkins School for the Blind, <https://www.perkins.org/history/people/figures-in-perkins-history#smith>.

<sup>5</sup> "What Is Braille?" What Is Braille? | American Foundation for the Blind, <https://www.afb.org/blindness-and-low-vision/braille/what-braille>.

<sup>6</sup> Prieto, Nikol. "Braille in the 21st Century." Assistive Technology at Easter Seals Crossroads, 12 Nov. 2009, <https://www.eastersealstech.com/2009/11/12/braille-in-the-21st-century/>.

<sup>7</sup> Prieto, Nikol. "Braille in the 21st Century." Assistive Technology at Easter Seals Crossroads, 12 Nov. 2009, <https://www.eastersealstech.com/2009/11/12/braille-in-the-21st-century/>.

## EVERYONE USES CAPTIONS! BY ADAM KOSAKOWSKI, M.ED., ATP



If you're deaf or hard of hearing or know someone in that population, you likely know about captioning and how they're needed on videos for them to be accessible. Did you know that 80% of people who use captions are not deaf or hard of hearing? I am part of that 80%. Although I do not identify with deafness or being hard of hearing, I always turn on subtitles/captioning when available because it improves my comprehension of dialogue and increases my engagement with the video. I love captions! What I'm saying is, captions are used by a vast audience! (For this statistic and more, check out this [captioning statistics article by 3PlayMedia.](#))

Quick fact! Captioning and subtitles are technically different! Subtitles are text during a video that includes spoken dialogue. Compare this to captioning, which includes spoken dialogue and non-dialogue noises like laughter, coffee pouring, explosions, etc. even though the two terms are often used interchangeably nowadays. This article will use the term captioning in this flexible way.

So, close to everyone wants captioning, disability, or not. But, captioning on videos in social media is rare, especially when you consider how many videos are posted every day! The good news is that you do not need to be a video editing expert to add captions to your videos. There is a myriad of ways to add captions to your videos. My favorite is [Clipomatic](#) on Apple devices.

Clipomatic costs \$4.99, but it is so worth it. When you start up the app, you press the big red record button and start recording, just like in other recording apps. While you record, the app automatically hears what you're saying and adds captions to your video. When you're done, press the stop button. Before you save your video, you can even tap a caption it created and then edit it, which is great when the app makes a rare mistake in its word recognition.

Using apps like this, you can seamlessly add captioning to your videos and post to social media. Taking this small extra step can help you make a statement as someone who is an accessibility advocate!

This article is written by Adam Kosakowski, M.Ed., ATP Adam works as an Assistive Technology Specialist at New England Assistive Technology (NEAT), an Oak Hill Center. He can be contacted at [Adam.Kosakowski@OakHillCT.org](mailto:Adam.Kosakowski@OakHillCT.org) and followed on Twitter: [@NEATwithAdam](https://twitter.com/NEATwithAdam)

## AUGMENTED AND VIRTUAL REALITY ALLOWS INDIVIDUALS TO EXPERIENCE AND INTERACT BEYOND THE RESTRICTIONS OF TIME AND PLACE

BY KAHLIL CALAVAS AUGMENTED AND VIRTUAL REALITY SPECIALIST



Image from Oculus Quest

What a time we are living in. From political unrest to a pandemic, our days are full of hurdles we have never faced as a nation. Despite these intense challenges, many of us are only minorly inconvenienced as we can still throw a mask on and do pretty much everything we need to do. That being said, there are those out there with disabilities who do not have that luxury. Actual physical visitors and in-person assistance have become much more difficult, leaving many isolated and vulnerable positions. Even though these conditions are making operations a logistical nightmare, remote technologies are being innovated exponentially. In particular, two technologies may potentially assist special-needs individuals at levels even more remarkable than pre-Covid-19 times.

Augmented and virtual reality allows individuals to experience and interact beyond the restrictions of time and place. From counseling to training, VR and AR create embodied experiences without the risk of Covid. Individuals who had previously lived in relative isolation can now attend a conference, partake in safety training, or make meaningful friendships in virtual social networks like Altspace and Facebook Horizon. These types of interactions can support mental health and improve the quality of one's life. At this point, you may be thinking development costs are certainly out of your budget; however, with companies eager to see widespread adoption, headsets and platforms have been created to make it accessible in both price and learning curve.

With the reduced physical contact for many individuals, we can expect a rise in depression and an array of safety issues that are usually cleared through social assistance and in-home services. With virtual reality, we can give all parties involved the ability to be on-site (albeit virtual) with a flick of a switch. We can even capture a location in 3d, which would give the virtual visitor an actual life scale experience allowing real-world problem-solving. Imagine being able to access real utilities, appliances, and lights by combining "IOT" (internet of things) and replicated virtual reality environments developed with actual location scans. The potentials are endless yet can start with the simple process of getting some headsets and meeting in a social VR application. Onboarding has never been so easy because you don't even have to leave your house.

This article is written by Kahlil Calavas, a Virtual and Augmentative Reality Specialist.