

# **NASCIO 2018 State IT Recognition Awards**

## **Enabling Technologies to Enhance Communications**

**Category:** Information Communications Technology (ICT) Innovations

**State:** Ohio

**Contact:**

Katrina B. Flory  
Ohio Department of Administrative Services  
Office of Information Technology  
614.995.5466  
[Katrina.flory@das.ohio.gov](mailto:Katrina.flory@das.ohio.gov)

**Project Initiation:** Project started in December 2016, beta testing through October of 2017

**Project Completion:** Service transitioned to full production in November of 2017

**URL for the Next Generation Telephony Service:**

<http://www.das.ohio.gov/Divisions/Information-Technology/Next-Generation-Telephony-Service>

## Executive Summary

Under Governor Kasich's leadership, Ohio launched an IT Optimization initiative that has transformed the way the IT infrastructure is managed and services are delivered. As part of that initiative, customers are adopting a hosted unified communications solution. The service can be consumed by all state agencies, as well as all public colleges and universities, K-12 schools, local governments, and libraries. Unified communications adoption is creating an accessible and collaborative environment for everyone, making the state more efficient, and saving Ohio taxpayers' money. Currently, over 50,000 VoIP phones and hundreds of video endpoints are deployed throughout Ohio.

The Unified Communications team continually challenges itself to innovate and deliver service enhancements that change the way state business is conducted and they are working to empower users through the implementation of accessible technologies. Most recently, the team has developed a number of video offerings that eliminate the need for agencies to run their own costly video bridging solutions. Specifically, the Unified Communications team worked with the hosted VoIP vendor to create a hosted cloud video bridging solution that is integrated with Skype for Business. The solution allows Cisco video phones, any compatible video endpoint, and any client that can use Skype for Business (e.g., desktops, tablets, and smartphones) to join a video collaboration session. Another area of focus is ensuring that the enterprise solution provides accessible alternatives to traditional delivery methods. Most recently, Governor John Kasich stressed the need to ensure that those individuals who are deaf or hearing impaired can continue to make an impact in state government and have access to employment opportunities.

In alignment with Governor Kasich's initiative, the Unified Communications team has implemented a number of accessible technologies, including video. Through innovation, creative partnerships, and collaboration, Ohio is at the forefront of using technology to empower individuals with impairments. The tools that are now offered as part of the Unified Communications service have not only had an impact within the state, but also throughout the nation.

By working diligently to understand user needs, and through an unwavering commitment to not accept the status quo, the Unified Communications team has worked closely with its partners to deliver technology that revolutionizes the workplace, including:

- accessaphone
- Closed Captioning for Business Phones
- T-Coil Hearing Aids and Cochlear Implants
- ipTTY
- Phone Software Updates
- Skype for Business
- Video Conferencing and Video Phones
- American Sign Language

## Concept

The State of Ohio realized years ago that it no longer needed to be in the phone business and that it needed to move toward a more advanced and accessible means of communication. The first step for the state was the implementation of the hosted VoIP solution, followed by a number of additional unified communications tools such as Skype for Business and video conferencing. In direct alignment with the goals of IT Optimization, the unified communications effort continues to expand. To date, over 50,000 phones and hundreds of video endpoints are deployed, allowing for improved accessibility, enhanced business processes, reduction of travel, more effective communication, and innovation.

Much like the desire to no longer be in the phone business, Ohio decided that it no longer wanted to be in the video bridging business. Many agencies had their own, aging video bridging solutions. These solutions can be expensive to maintain and upgrade, and many were only agency-facing and did not easily allow for cross-agency collaboration. Working with the cloud vendor, CBTS, a video bridging solution using Polycom and Skype for Business integration was implemented. Since Ohio adopted Office 365 and Polycom as standards, this would allow the tools to connect and work together and deliver savings in terms of travel and time, as well as eliminate the costs associated with other collaboration tools that were in use across the state.

The new hosted video solution also includes recording, automatic updating of endpoints, tiered pricing (price reductions as adoption increases), and a bridging service that is managed and kept up-to-date by the cloud provider. Traffic within the state stays on the state network and the solution is housed in the same data centers that include security, compliance, and other factors.

With the new video solution, the state adopted a “video first” stance when it came to attending meetings to allow for savings in travel costs and the recovery of the time. Over 20,000 video phones that allowed for point-to-point video calls were now able to join video conferences that could also be joined by video systems, smartphones, tablets, laptops and desktops, leveraging the integration of Skype for Business. However, the state recognized that more needed to be done with regards to assisting employees with Americans with Disabilities Act (ADA) needs.

Innovation sometimes occurs when the need to solve an issue arises and necessity meets opportunity. In Ohio, the architect that was leading the charge to deploy cloud based unified communications was approached by a co-worker with a need. The co-worker shared that he was suffering from hearing loss, and was having increasing difficulty following what was being said over the phone. He inquired as to whether Ohio’s VoIP phones could perform closed captioning. It was determined that the existing state phones did not have this capability. Through research, the architect found a small company that

was working on providing closed captioning on business phones. However, the company explained that the technology was too difficult to complete and maintain.

Disappointed, but not deterred, the architect had an idea. The architect contacted a vendor that Ohio was using for other ADA related tools within their cloud solution, accessaphone, which is provided by Tenacity. Tenacity was asked about their interest in acquiring the closed captioning technology. The vendor with the technology was also asked if they were interested in allowing another company to take on the challenge. As a result, Ohio helped to make the connection between these two organizations and they initiated private negotiations.

While the companies continued their technology acquisition discussions, VoIP deployments continued. During this time, students at the Ohio School for the Deaf were observed using the video VoIP phones that Ohio was deploying to communicate via American Sign Language. It was becoming obvious that video phones were also an enabling technology. In fact, Ohio has deployed over 50,000 phones, with 20,000 of those being video phones as well as hundreds of video endpoints. These phones and endpoints are integrated with Skype for Business, which allows for the use of American Sign Language. In addition, when integrating Skype for Business in Broadcast mode for larger meetings, the solution can offer captioning for the hearing impaired.

A few months later, Tenacity reached out to Ohio to let them know that they had taken ownership of the captioning technology. They asked if Ohio wanted to be the beta tester once they were ready for testing. The co-worker that originally approached the architect agreed to be the first tester. CBTS agreed to connect the technology through the cloud to the vendor and to Ohio's cloud solution. Testing began in early 2016 and consequently, Ohio became the first place in the world to have closed captioning on a business phone. A service like this was available for many years to residential users through Hamilton CapTel phones. Tenacity partnered with Hamilton CapTel to use the same U.S. based contact center agents that were highly trained and already delivering a similar service to citizens. That service, funded by the Federal Communications Commission, provides captioning to U.S. residents with a need.

Through the partnership between Tenacity and Hamilton CapTel, the Hamilton CapTel for Business, Interconnected by Tenacity, service was introduced. Users with a need register through Hamilton CapTel with the FCC to be approved. CBTS pushed the app out to all of Ohio's Cisco VoIP phones so that users could simply select the app on their VoIP phone and receive closed captioning services in near real time.

Once announced, more users across the state suffering from hearing impairment signed up for the new service. Since it is a cloud solution, anyone using the Ohio hosted VoIP

service, including not only state government agencies, but also counties, schools, libraries and others, can now receive this service for those with a verified need.

In February of 2018, all of Ohio's agencies, boards, and commissions were educated about this and other accessibility tools that are available as a part of Governor Kasich's initiative to identify and hire more hearing impaired workers for state government. At the training sessions for Ohio human resources personnel, hosted by Opportunities for Ohioans with Disabilities, the Ohio Department of Administrative Services (DAS) Office of Information Technology (OIT) had the opportunity to demonstrate its hosted VoIP closed captioning solution and the accessaphone suite of products. The training sessions included representatives from over 60 agencies. A live demonstration of the closed captioning solution for hearing impaired users was provided as well as a discussion of how to use accessaphone and pairing hearing aids and other devices to VoIP phones.

In addition to the tools already mentioned, a multi-channel communications service was recently added to allow for interaction through text, chat, voice, email, and more to ensure that no matter what channel a citizen wants to use to communicate, Ohio is ready. accessaphone and other solutions, such as ipTTY software, are also available to all users of the state's hosted VoIP solution. The solutions, provided by Tenacity, are licensed for use at no additional cost. accessaphone allows for easy call control for people with a loss of vision or dexterity. ipTTY enables users to communicate with TTY machines or the Text Relay Service (TRS). Ohio's VoIP phones are also compatible with t-coil hearing aids and cochlear implants, allowing users to hear more clearly and without feedback.

The Unified Communications team also recently implemented a software upgrade on Ohio's Cisco 8800 series phones that makes significant improvements for the blind and visually impaired. Once turned on, important information is communicated through audible voice and tone indicators (e.g., When someone calls, the name or number is announced. Also, as a user dials numbers or any button is selected it is announced and the user is guided via voice). The Ohio School for the Blind is testing this technology as well as other accessibility options.

The state is also using its video solution to begin to engage in telemediation. Telemediation is mediation by means of telecommunications technologies. By allowing workers to meet with arbitrators and participate in mediation via video, time is being saved and travel costs reduced. Captioning will also support this process for our deaf and hearing impaired workers.

Additional information about Ohio's accessibility and video resources is available on the [hosted VoIP solution Web page](#).

## Significance

Previously, accessibility, video conferencing, and collaboration tool needs were addressed on an agency-by-agency basis and solutions were not approached from an enterprise perspective. This directly impacted interoperability, expense, and security. It also impacted the state's ability to leverage its buying power to obtain innovative solutions for all state agencies. With the previous model, building a solution to deliver on the state's needs was cost prohibitive and not obtainable for most agencies. The development of the unified communications approach, as a result of IT Optimization, allowed the state to provide solutions in a new and different way. The Unified Communications team leveraged their partnership with the state's cloud vendor to enhance the existing hosted VoIP solution to include additional video capabilities, accessibility solutions, Skype for Business integration, and other Polycom technologies for the enterprise. The new approach allows for more affordable adoption, savings in travel and time, as well as cost avoidance for other collaboration tools. In addition, standardization enables more effective and seamless communications between state entities and users.

The Unified Communications team has also broken down barriers and is allowing every state employee to do their jobs in an easier and more collaborative format across government. Governor John Kasich has lead this initiative with his goal to ensure that individuals who are deaf or hearing impaired can continue to make an impact and have access to employment opportunities. In support of his initiative, the team was instrumental in connecting businesses to facilitate the innovation needed to deliver the new Hamilton CapTel for Business solution that is now being leveraged across the United States to help those that are deaf of hearing impaired. Few times in state government does the opportunity present itself to impact everyone in Ohio and beyond with tools that enable others.

In addition, with the new video and accessibility solutions in place, meetings with other states and outside parties can now be easily conducted. Video is not only enhancing day-to-day communications, with the ability to see facial expressions and body language, but it also allows for the use of American Sign Language.

The Unified Communications team has also implemented services that are affordable and can be leveraged by smaller entities, ensuring that effective communication is available statewide. For example, the Enhanced Contact Center offering, which was initially built out due to a County Shared Services initiative need, allows smaller agencies and entities that could not otherwise afford this type of advanced technology the ability to use it. This offering includes agent desktops that are integrated with data, including CRM tools such as Salesforce, speech-to-text, advanced IVR, auto dialers, quality management, workforce management, and much more. Small counties and cities can now use these tools too. It enables them to use multi-channel

communications such as chat, text and mobile capabilities. Providing the entire Ohio enterprise with the ability to leverage such technologies, and utilize enterprise solutions and pricing in the process. It is a big victory for Ohio taxpayers.

The ability to leverage unified communications technologies across government, such as video, without having to figure out how to make disparate systems talk to each other, simplifies and facilitates collaboration across governmental boundaries. It also allows for more efficient delivery of solutions to citizens.

## **Impact**

The impact of gaining efficiency and reducing costs are self-explanatory. Many times, the cost of the time to travel to a meeting in growing areas such as downtown Columbus can be variable and costly. Solutions that allow government to move at the speed and efficiency of business allow government to serve citizens and businesses more effectively.

Another aspect of this solution, the Skype for Business integration, allows the state to better leverage collaboration technology. It also allows for access via many devices, from just about anywhere you can connect to the Internet. When coupled with the thousands of Cisco video phones already deployed, this also allows those devices to be better leveraged not only in day-to-day-communication, but they can also be used to assist the hearing impaired that use American Sign Language to communicate.

Doing all of this in the cloud means that upgrades and new features can be deployed to the entire enterprise at once. Getting out of the phone and video business, and using a cloud solution, allows the state to focus on serving citizens and business, and not on maintaining the technology needed to deliver the solution.

The impact of offering accessible, unified communications is huge and hard to quantify. For the first time since the telephone was invented and became a part of the business world, workers that are deaf or hearing impaired can now get closed captioning on their phone. In the past, while a worker could get a residential version of the CapTel phone in their work environment, it singled them out, and meant that they could not easily transfer calls, have work based voice mail, or many of the business telephony features of their working peers.

What is also unique about the state's unified communications solution, is that it was originated within government. Government is typically a follower and not a leader in such innovations. In speaking with a vendor, Ohio discovered that Arizona is using a similar model as well as federal agencies and others are exploring the option. Many private corporations are also leveraging a similar solution. The impact is across industries and across the country!