

College for the Deaf Experiences Value of TelePresence

Customer Case Study



Photography by Mark Benjamin/NTID at RIT.

National Technical Institute for the Deaf receives \$100,000 Cisco research grant to improve accessibility.

EXECUTIVE SUMMARY

Rochester Institute of Technology/
National Technical Institute for
the Deaf

- Education
- Rochester, New York
- 16,000 Students

Challenge

- Advance global collaboration among students who sign
- Explore new technologies to support communication for those who are D/HoH

Solution

- Cisco TelePresence System 1300
- Cisco TelePresence System 3210

Results

- Cross-collaboration and education amongst faculty, staff and students worldwide
- Partnering allows for cutting-edge learning and findings that will benefit countless others in the future
- Three strand research excellence and technological innovation will allow for better Cisco product accessibility

Challenge

The National Technical Institute for the Deaf (NTID) is one of the nine colleges of the Rochester Institute of Technology (RIT). Every year, approximately 16,000 undergraduate students from around the world, including more than 1600 who are deaf or hard of hearing (D/HoH), are able to take advantage of the benefits of an NTID education.

Instructors at the institution utilize a variety of communication methods while teaching, including sign language, finger spelling, printed and visual aids, real-time captioning services, as well as web-based instructional materials. The personnel includes note takers and a large interpreting staff.

Although plenty of opportunities are available for the D/HoH students at the NTID, the college wanted to advance global collaboration among students and teachers who sign for themselves. They were committed to exploring methods of simplifying and improving their approach to communication, but needed assistance.

In November 2009, the former president of RIT/NTID visited the Cisco accessibility team in San Jose, California and was intrigued by the immersive, in-person experience of Cisco TelePresence®. Inspired by the meeting, Cisco Senior Manager of Accessibility, John Combs, raised the idea of obtaining a research grant for NTID. Combs recognized the opportunity, and asked Cisco Accessibility Hardware Engineer Shraddha Chaplot to research how to acquire a Cisco research grant to help people who are D/HoH with Cisco technology.



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“Shraddha Chaplot, Cisco Accessibility Hardware Engineer, was our advocate in both the administration of the current grant, and the complex acquisition and installation of the sophisticated Cisco TelePresence systems at NTID. This work was complicated, and crisscrossed many areas within both Cisco and NTID. Chaplot was always there, providing guidance to our team as we prepared for the installation of the systems and helping us connect with the appropriate persons within Cisco and the installing company. She clearly was our advocate through a very complex process and as a result, we have two functioning Cisco TelePresence systems on our campus. These systems are the core technology of our research program related to Cisco TelePresence as applied to educational, business and communication situations.”

—E. William Clymer
Associate Director of NTID's
Center on Access Technology

Through investigation, Chaplot learned that granting Cisco® TelePresence to the college would have several benefits:

- Cisco TelePresence would allow the college faculty, staff, and students to meet other deaf community members, collaborate without having to travel, and become more technologically aware.
- Testing Cisco products within a controlled laboratory setting with different communication situations could be enhanced with Cisco TelePresence technology.
- New and imaginative uses and implementations could be identified by daily D/HoH users of Cisco technology and eventually incorporated into future products. This specialized knowledge could be used to evaluate Cisco technologies for probable enhancement, adaptation, and deployment for the deaf community.

After review meetings with NTID, the Cisco Accessibility Team assured NTID that Cisco would provide the necessary support and expertise such as interoperability, accessibility, and product support. In addition, Combs and Chaplot set goals of aligning the research in areas that were highly needed. In February 2010, the NTID team submitted a grant application to Cisco research and waited anxiously. Cisco research made the recommendation to pursue this grant, resulting in a one-year, US\$100,000 gift funded by the Silicon Valley Community Foundation.

Solution

In a multistrand effort, NTID agreed to provide a team of specialists who would help with research and conduct preliminary investigations in the areas of 911 emergency calls, avatars, and Cisco TelePresence. The first strand explores ways to use smartphones and Internet technology to permit a person who is deaf to make a 911 emergency call. The second strand involves designing a signing avatar system. Avatars, virtual representations of people, can potentially be utilized in educational settings or workplaces to offer a bridge between visual and spoken language. The third strand targets Cisco TelePresence, the premium face-to-face conferencing experience over the network. NTID agreed to research ways to extend these capabilities so that Cisco TelePresence could potentially also respond to visual communications such as American Sign Language (ASL) and be utilized in their classroom setting. NTID's findings across these three areas will be essential in identifying new ways to improve technology for individuals who are D/HoH.

Originally, Cisco and NTID agreed to deploy a single Cisco TelePresence System 500. After discussing this in greater depth with sales engineers, the team decided to install a single screen with the Cisco TelePresence System 1300 and three 65-inch plasma screens with the Cisco TelePresence System 3210. With the ability to host up to 18 participants in a dedicated room, the Cisco TelePresence System 3210 would be ideal for NTID's large team meetings, cross-functional or training events, and distance learning. During the actual installation phase, Chaplot worked with third-party installers to build a customized 14-seat room to fit the room better and to help ensure room for wheelchair access.

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Results

NTID is now able to have real-time video conferencing with people around the globe. The value of the TelePresence Center grant from Cisco is approximately US\$700,000. Recently, two NTID computing and information students (Samuel Sandoval, of Fairfax, Virginia, and Kelley Duran, of North Fayston, Vermont) completed co-ops with Cisco. Sandoval and Duran completed projects demonstrating how to integrate Realtime Text (RTT) into a product, such as the Cisco Cius™ Android tablet, and Closed Captioning integration solutions for Cisco TelePresence.

They scoped ways to caption Cisco TelePresence video conferences to allow persons with hearing disabilities, or those operating in a second language, to read conversations in real-time during a video conference. Through this cooperative education experience, these product engineering teams came to the self-realization that the world not only needs a greater awareness of accessibility, but that all products should be accessible to all employees, consumers, and customers.

Next Steps

Cisco's partnership with leading institutions, such as RIT/NTID, combines research excellence with technological innovation. For NTID, Cisco TelePresence is making a difference in faculty, staff, and student communication. This and the other two strands of research are expected to continue at RIT/NTID through 2012, when the college will present findings to Cisco research. Support for this research is part of the Cisco commitment to bring the power of the network everywhere; transforming the way the world communicates and collaborates.

"The quality of this technology is a quantum leap ahead of any other conferencing capability out there," says E. William Clymer, associate director of NTID's Center on Access Technology.

More Information

To follow the progress of the grant, visit NTID's website:

<http://www.rit.edu/ntid/cat/cisco/>.

Watch a video the Cisco team created regarding this effort:

<http://www.youtube.com/watch?v=Wj9OzEN50vw>.

For more information on Accessibility at Cisco, please go to:

<http://www.cisco.com/go/accessibility/> or email us at accessibility@cisco.com.



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