

Supporting BYOD Collaboration in Person and Online

Live, real-time collaboration is now possible using multiple devices and platforms, either in person or across several different locations. Distance learning might never be the same.



Working together as a team to edit documents, hash out ideas, and brainstorm solutions to solve complex problems in real time can be challenging. When team members can use their own devices to offer input, the process becomes easier. But supporting a mix of devices and platforms in one collaborative space is problematic—and what if some teammates aren't in the same location?

Fortunately, a new technology solution can help.

NEC Display Solutions of America and T1V have teamed up to combine a large touch screen display with innovative software for collaboration. The result transforms learning and working in the same room or across multiple locations, says Richard Ventura, Vice President of Strategy at NEC Display—while making true distance collaboration possible.

The solution allows users to work in a collaborative setting—accessing multiple files and truly engaging. Added into this via AirConnect, devices are able to connect wirelessly to the ThinkHub, creating an even more engaging experience. Applications, documents, you name it, can then be shown wirelessly on the NEC display. So whether individuals are using Windows, Android, MacOS, or iOS devices—they can share their screens and work together on the same document in real time. As each person makes notes, annotates text, or sketches ideas using his or her own device, the changes appear live on the shared display. “You don't have to go up to the display to physically touch and interact with it,” Ventura noted.

What's even more appealing is that the contributors can be in the same room—or they can be in a remote location thousands of miles away. Ventura described how one university conducted distance learning while working on a group project with students overseas. Four members of the group were in California and the other four were in Germany. The entire group was able to engage and collaborate with one another. “Not having a collaboration platform really makes this kind of project hard, because you're not able to work in real time,” he said. “You're creating something and then emailing it back and forth and commenting on it.” But when the students have a solution like the NEC-ThinkHub bundle, “they can actually collaborate simultaneously. They can see what each other is seeing, talk to each other using videoconferencing, and work on the project together much more easily.”

What the Solution Includes

The NEC Collaboration Powered by ThinkHub bundle includes a 55-inch, 65-inch, 70-inch, 80-inch, or 84-inch interactive touch-screen display from NEC, along with T1V's ThinkHub software, which creates a collaborative workspace that can accommodate any Windows, Mac, iOS, or Android device.

ThinkHub is a dynamically configurable workspace that enables users to protect their meetings with passwords, take notes, use multi-touch web browsers, convene videoconferences, and connect several devices wirelessly to an NEC display. Once users have downloaded and installed T1V's AirConnect application to their laptops, tablets, or smart phones, they can use their devices to connect with the ThinkHub workspace and interact with content. The AirConnect application also allows users to stream content from their own devices to the shared screen live, in real-time—and the software's Auto-Present Mode lets users leverage their own devices as presentation tools on the NEC digital screen.



"If you look at most collaboration solutions, they tend to be centered around a single platform, such as Microsoft's Surface Hub," Ventura said. "That is a Microsoft ecosystem. This is an open, BYOD (bring your own device) ecosystem, allowing for multi-platform collaboration. Whether I have a Macbook, an iOS device, an Android device, or a Windows computer, those devices can all interact with the ThinkHub platform."

That's important for education, where students often bring their own devices to class—and campus leaders must support a wide range of systems and platforms.

Ventura called the NEC-ThinkHub bundle an "amazing fit" for education. And with the more fully featured version of the ThinkHub software, users can record a session, save it to a cloud-based storage drive, and email it to multiple people for their review—making the solution even more useful as a teaching tool.

Collaborating in Person—or Online

There are three different versions of the ThinkHub software. ThinkHub Base is a LAN based platform that is designed for users connecting through the same local-area network. It supports an unlimited number of devices connecting to the shared display, but only two devices can stream live feeds—and all users have to be in the same building.

ThinkHub Standard is a more robust version of the software. It supports an unlimited number of simultaneous live streams from any network.

It allows for collaboration from multiple places, so you don't need to have everybody in the same location," Ventura said. "You could have one person at the University of Minnesota, another at Washington State University, somebody else at a college in London, and a fourth person at a college in Germany. All four could be on one session simultaneously."

He added: "I could be writing something, and someone else could be adding to it. All four of us could be communicating at the same time, on the same screen. And it's all in real time, so as I'm doing things, you're seeing it pop up in front of you. I might circle something and say, 'This is what we need to solve.' You could look at it and say, 'No, this is what we need to solve.'"

ThinkHub Standard also allows users to save and resume sessions, as well as print or email them to others.

"We've become such a visual society, where we need to look, feel, and touch as we're working through our ideas," Ventura said. "We're so used to our iPhones, our iPads, our interactive devices. This gives students a space where they can engage with each other and work through ideas together on a large palette." And the ThinkHub collaborative workspace is quite a bit larger than the dimensions of the flat-screen display. "You have 20 times the space," he said. "The actual work surface is massive. You can slide the surface aside and expose even more workspace."

The third version is the ThinkHub Premium offering. Bundled with NEC's 4K displays, the Premium edition carries the same features as the Standard line but with the added bonus of supporting 4K resolution.

In addition, the solution supports software-based videoconferencing services such as Skype, as well as hardware-based videoconferencing systems from providers like Polycom and Cisco, so users can see and interact with each other as they are interacting with the content.

"We support a lot of platforms, and not just a proprietary platform such as Microsoft," Ventura said. "Users can be exchanging ideas back and forth, drawing, updating, and sharing information from their personal device. It allows for true collaboration in working and learning."

Possibilities for Education

The ability to work well with others to make decisions and solve problems is an increasingly valued skill among employers. In addition, social learning theory suggests there are benefits to student collaboration: The work that students can produce together is much more sophisticated than what they can produce by themselves.

For these reasons, many educators are moving beyond traditional lectures in favor of more active and collaborative approaches to learning, in which students work together in groups to solve a problem or complete a task.

Schools and colleges can use the NEC Collaboration Powered by ThinkHub solution to support this kind of collaboration in their classrooms, huddle spaces, and media centers, Ventura said—and the solution also has huge implications for distance education, allowing students to collaborate more easily in real time from wherever they are.

The solution has many uses outside the classroom as well, allowing instructors and administrators to collaborate on lesson plans, curriculum, strategic planning, and more. "It can be used for interdepartmental communication, as well as communication and collaboration across multiple institutions," Ventura said.

Journalism students, for instance, could use the solution to co-edit a publication. "Imagine having every single page in front of you on the screen, and being able to scroll through them and mark them up as a group—cross things out, circle them, move them around, and put them in a different order," he said. "You could engage collaboratively with the entire publication, then save the file and send it back to everybody, so they could make those changes to the actual file."

Medical schools could use the technology to have students discuss cases with outside experts. "You could pull up imagery and have experts circle parts of an image remotely as they're discussing those aspects," Ventura said.

Business schools could use the technology to have students collaborate on business plans, or even to coach local businesses. "Many business schools are trying to do more outreach, reaching out to small and medium-sized businesses to help them grow," Ventura said.

"Imagine being able to do that through online collaboration, so you don't need to have those people leave their business. They could be interacting with you from their business while they're doing the rest of their day-to-day stuff."

Getting Started

Installing the NEC-ThinkHub collaboration solution is simple, Ventura said: All you need is power and internet access.

"When you order the NEC Collaboration Powered by ThinkHub bundle, it comes with a touch-screen monitor, cables, and the ThinkHub device," he said. "We have options for cameras as well. Aside from that, all that's required is mounting it on a wall or putting it on a cart." Schools that plan to integrate the solution with an existing videoconferencing system can use an integrator to help them set it up, he added.

When considering any type of collaboration solution, Ventura said, it's important to ask: How does it work in my environment? How does it help me deliver on what my goals are?

"We're focused on delivering a solution that, no matter how big or small your learning environment is, you're going to be able to use it," he concluded. "It's scalable and flexible enough to meet any school's needs."

