Giving Back to the Community!

Assisting rural underserved areas is a core philosophy of CERMUSA. Nothing better illustrates this concept than CERMUSA’s Annual Assistive Technology Exposition!

This event, which began in 2005, is held at CERMUSA’s satellite office, the National Telerehabilitation Service System, located within the Hiram G. Andrews Center in Johnstown, Pennsylvania. It was started to provide residents from the surrounding area (which is comprised of a large population of older adults, individuals with disabilities, and warriors in transition) with the opportunity to learn about technology devices and services that can enhance their quality of life.

This year’s event featured local and national guest speakers, exhibits by thirty vendors, and breakout sessions on topics including the benefits of exercise, alternatives to nursing home care, and home safety.

Happy Holidays!

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The CERMUSA Newsletter is published quarterly. Questions or comments are welcomed and may be directed to: Lori McClellan, Documentation Specialist lmcclellan@cermusa.francis.edu
CUTTING-EDGE TECHNOLOGIES HELP FIRST RESPONDERS

Through CERMUSA’s Wireless Test Bed, employees have the opportunity to take off-the-shelf technologies and combine them in unique ways to develop cutting-edge technologies that are helping individuals in rural and remote areas stay safe. One employee, Wireless Communications Specialist Dave Wolfe, has done just that by creating the RF to IP Bridge System (patent pending) and mesh networking boxes. Mr. Wolfe and his inventions were recently featured in a local television news story. While being interviewed, Mr. Wolfe discussed how this technology is helping first responders in isolated areas overcome communication “dead spots” by providing audio, video, and Internet access through Wi-Fi nodes. He demonstrated how a remote control robotic camera can allow emergency personnel to access and analyze dangerous situations via video without actually putting themselves in physical danger. His inventions were tested and used by the Johnstown Fire Department; during a large structure fire, they aided communications between emergency personnel and withstood high temperatures. Currently, they are being tested by the Richland Fire Department.

COLLABORATION BENEFITS STUDENTS WHO ARE DEAF OR HARD OF HEARING

CERMUSA is collaborating with the Postsecondary Education Programs Network (PEPNet) to provide visual interpreting services at a distance via videoconference to individuals who are deaf or hard of hearing. PEPNet, which was established in 1996, is a national collaboration of four regional centers and is supported by cooperative agreements with the U.S. Department of Education and Office of Special Education Programs. It works with service providers in postsecondary education programs to provide resources, information, in-service training, and expertise to enhance the educational opportunities of individuals who are deaf or hard of hearing. Earlier this year, PEPNet furnished CERMUSA’s NTSS location with a high-definition videoconferencing system. American Sign Language interpreters based at the Hiram G. Andrews Center (HGAC) are currently using this system five days a week to provide in-class interpreting services to a student attending a public school in Vermont. By remotely connecting to a similar unit in the student’s classroom, interpreters at HGAC are able to provide the vital accommodations to enable effective communication in the classroom. CERMUSA is very excited about the potential shown by the technology and is proud of the collaboration with PEPNet.

TECHNOLOGY CAPABILITIES PROVIDED TO COLLEAGUES

CERMUSA was contacted by staff from the National Center for Disaster Medicine and Public Health (NCDMPH) to supply technology capabilities for their Federal Partners Workshop, “A Nation Prepared: Education and Training Needs for Disaster Medicine and Public Health,” held on September 24. NCDMPH is a center of the Uniformed Services University of Health Sciences (USUHS) located in Bethesda, Maryland.

The technology capabilities that CERMUSA supplied helped NCDMPH conduct a learning technology demonstration involving a H1N1 flu scenario. The demonstration utilized Second Life, a free, virtual world that is accessible via the Internet. CERMUSA created a virtual hospital setting for use by medical students for training. The demonstration also used a web and video conferencing program called iLink that enabled the students to interact with healthcare personnel over the Internet. CERMUSA’s case study, which made extensive use of both online and handheld-based video files to illustrate proper medical procedures, was also used. The integration of all three technologies provided the medical students with an immersive online training experience.

CERMUSA TECHNOLOGY AIDS EMERGENCY RESPONSE TEAM

On October 21-22, the New Jersey Monmouth County Emergency Response Team, in conjunction with the Colts Neck New Jersey police and sheriff departments, conducted a training session at Colts Neck High School. The event was conducted to test the readiness of these divisions in the event that a hostage situation would occur at the high school. In conjunction with Monmouth University’s Rapid Response Institute’s Joint Mobile Command and Training Center vehicle, CERMUSA staff utilized its RF to IP Bridge System and mesh network boxes to enhance communications within the high school to a command center located outside the building. By testing and configuring the mesh network boxes, staff was able to enhance the use of emergency frequencies in dead zones located throughout the building. As a result of this event, valuable information about the use and effectiveness of both of these devices was obtained for future use in constructing more efficient models.
CERMUSA Staff Participate in Saint Francis University Events

Presentations for Occupational Therapy Students
Kent Tonkin, Assistant Director for Information Technology, gave a presentation to Saint Francis University Occupational Therapy students during the Day of Reflection held on October 6. Mr. Tonkin’s presentation, “Getting Connected: How to Use Technology to Help Patients in Rural Areas,” explored various technologies that can be utilized by healthcare professionals.

On November 24, Carol McIlhenny, Telehealth Research Specialist, gave a presentation to Occupational Therapy students on assistive technologies. The students had the opportunity to try various technologies, including augmentative communication devices, alternative keyboards, and magnifiers.

Medical Simulation Demonstrations
During October and November, CERMUSA staff conducted hands-on medical simulator demonstrations for Saint Francis University Occupational Therapy and Exercise Physiology students. The medical simulator, which is on loan to CERMUSA from the University of Pittsburgh Medical Center’s Peter M. Winter Institute for Simulation, Education, & Research, affords the students with the opportunity for practical application of the theory they learn in the classroom. Staff involved in these events included Brenda Guzic, Telehealth Research Specialist, Dr. Jennifer LeMoine, CERMUSA Subject Matter Expert and Assistant Professor of Exercise Physiology, Physical Therapy Department, and Dawna Knee, Technology Coordinator.

Technology Day & Science Day
Saint Francis University hosted Technology Day on October 15 and Science Day on November 24. Both events are held for local high school students who have an interest in pursuing careers in these fields. Kent Tonkin, Assistant Director for Information Technology and Brenda Guzic, Telehealth Research Specialist, gave presentations at both events on their Autism and drumming research. Graduate Assistant Jonathan Miller gave a presentation on digital architectural modeling during Technology Day and robotics during Science Day. Robert Mainhart, Program Manager for the CiMeRC and NIOSH programs, gave a presentation on CERMUSA's Mobile Communications Platform and its use in providing above ground communications for rescue workers in underground coal mining accidents during Science Day.

Distance Learning Staff Participate in IVLA Conference
Robert Griffin, Assistant Director for Distance Learning, and Dr. Kristine Anderson, Distributed Learning Course Management Specialist, were selected to present at the 2009 International Visual Literacy Association (IVLA) Annual Conference October 5 - 9 at DePaul University in Chicago, IL. Mr. Griffin’s presentation was entitled, “The Healthcare Presentation: PowerPoint and Word Visuals Combine for a Deadly Combination.” Dr. Anderson’s presentation, “Teaching and Assessment in Multi-User Virtual Environments,” demonstrated how to use technologies such as Blackboard in the classroom.

Mobile Communications Platform Involved in Several Events
CERMUSA’s Mobile Communications Platform, a vehicular solution that provides both telecommunications capabilities and a range of modular mission-specific tools that can be delivered wherever a temporary broadband “footprint” is required, was involved in several events during October and November.

On October 6, staff participated in the Mine Technology and Training Center’s (MTTC) Mine Rescue and Skills Competition in Prosperity, Pennsylvania. They demonstrated how the MCP can be used to provide above ground communications for rescue workers in an underground coal mining accident. On October 24, information about the MCP’s technology capabilities was presented at the Bud Shuster Run for Your Life event in Bedford, Pennsylvania. On November 10, staff attended Pennsylvania CareerLink’s In Demand Showcase at Johnstown High School. They discussed with students the MCP’s technology capabilities and careers in the technology field.

Employees Participate in DiSepio Institute 5K Events
Congratulations to CERMUSA employees Kent Tonkin and Lisa Gaston and graduate student Ashley Opfar for participating in the DiSepio Institute 5K Fitness Challenge on October 31. The event was hosted by Saint Francis University’s DiSepio Institute for Rural Health and Wellness. All three participants received a ribbon for finishing their event, and Mr. Tonkin received a medal for finishing in the top three in the men’s 5K race.

Upcoming Events
March 2010
2010 Society for Mining, Metallurgy & Exploration Annual Meeting & Exhibit, Phoenix Convention Center, Phoenix, AZ (Presentation)
Great Gifts for Geeks!
By Kent Tonkin

“Have Yourself a Geeky Little Christmas!”

It’s that time of year again! Every store is covered in red and green, Santa’s hanging out at the mall, and every tech columnist in the country is belting out a top ten list of the gadgets that any self-respecting geek would kill to have under their tree this holiday season!

Sure, anybody can pass off a USB thumb drive or an I-Tunes gift card… but the gift suggestions in this column will help you get in touch with the real spirit of your IT professional! Make no mistake, buying gifts for the geek on your list is no small task, which is why, in the spirit of the season, I offer to you The Cool and Cheap Buyer’s Guide to Geek Gifts. Without further adieu, let the cavalcade of computer camaraderie commence!

Emoticons in real life: There are times when words just aren’t enough, especially when you’re driving. Why not give your mobile geek an Animated Driving LED Emoticon? With a simple-to-use pushbutton control, you can display emoticons on your rear windshield to let other drivers know how you’re feeling (e.g., frownie faces for no-yield drivers). Make sure to check your local vehicle laws (and tolerance for road rage) before using! Hey, how much more fun can you have for just under $25?

Water lanterns: What geek wouldn’t love to use a solar powered water bottle cap to turn his or her H20 into a green energy lantern? This item fits all standard 2.25” bottle caps and makes a great addition to a camping pack (or laptop bag) for less than $20!

Attack of the USB accessories: The coolest part about USB interfaces has been easy connectivity and power distribution. The second coolest part has been the deluge of useless, yet fun, accessories that we geeks can attach to our workstations. Among the more tacky, yet cool items: check out the USB Snobot (a cyborg snowman complete with scanning eye and evil sound) and the Robot Owl (which moves its head, opens/closes its eyes, and operates in one of three owl “moods”). For well under $20, you can reward your geek as well as annoy his/her cubicle mates! Shell out a few more deniros and you can arm your cubicle dweller with a USB Webcam Missile Launcher. This bad boy even uses Microsoft Messenger to enable your geek to target and control it from anywhere with an Internet connection! For $26, this could be the most fun work disruption of 2009!

The ultimate “my-fi”: Got a total wireless addict on your list? Why not reward their Wi-Fi addiction with a Wi-Fi detector t-shirt. This garment has a decal on the front that really measures Wi-Fi signal strength (removable for washing) and sells for less than $20. Believe me, NOTHING says “geek” more than this gift.

For the neat freak: Why not shell out a mere $9 for a USB Mini Vacuum Cleaner to help your geek keep their keyboard tidy and dust free? This fine tool even includes a detail brush and an LED task light!

The preceding is a mere sampling of the wonderful and bizarre geek-related gifts available this holiday season. As a fellow geek, I’d be beside myself with glee to find any of these super-cool gadgets under my Christmas tree this year! Need a suggestion or want to share a story about receiving one of these kinds of gifts? Feel free to drop me a line! Until next time, Happy Holidays!